

# FOREST RESOURCES (FOR)

---

## **FOR 102 Introduction to Forest Management (2 credits)**

Intro to forestry, current management issues, timber and non-timber resources, educational and professional opportunities. Includes regional field trips ranging in length from one afternoon to one weekend. Cooperative: open to WSU degree-seeking students.

## **FOR 103 Introduction to Computer Applications in Natural Resources (1 credit)**

Introduction to basic software programs used in natural resources, including Microsoft Office. Typically Offered: Fall.

## **FOR 152 Careers in Forest Nursery Management and Technology (1 credit)**

Course promotes student success in college and preparation for a career in forest nursery management and technology, and explores personal and career interests, needs, and goals. Students are introduced to a variety of careers in the forest nursery industry through class presentations and guest speakers. Typically Offered: Fall.

## **FOR 153 Forest Nurseries Tour (1 credit)**

Course provides opportunity for students to experience commercial forest nursery operations across the Northern Rockies and learn about the challenges and opportunities in working for, owning, and managing a commercial forest nursery. May involve field trips. Typically Offered: Fall.

## **FOR 200 (s) Seminar (1-16 credits)**

Credit arranged

## **FOR 201 Industrial Forest Management and Sawmill Tour (1 credit)**

Field tour-based course examining the logging and forest products industries. Course will expose students to timber harvesting and forest product manufacturing processes and careers throughout the Inland Northwest. Introductory scaling, defecting, and merchandizing for harvested timber will also be covered through lecture and field exercises. Typically Offered: Summer.

## **FOR 203 (s) Workshop (1-16 credits)**

Credit arranged

## **FOR 204 (s) Special Topics (1-16 credits)**

Credit arranged

## **FOR 207 Properties of Artificial Growth Media (1 credit)**

Laboratory course that examines the physical and chemical properties of artificial growth media used in forest nurseries, with a focus on understanding the characteristics, functions, and use of common types of growth media for forest and rangeland plants. Recommended preparation: SOIL 205 The Soil Ecosystem. Typically Offered: Spring.

## **FOR 210 Winter Harvesting (1 credit)**

This is an introduction to chainsaw safety and operation, precision timber falling, and winter harvesting methods taught as an intermediate-level forestry field practicum during the final week of winter break. All day classes take place on the University of Idaho Experimental Forest. Safety instruction covers methods taught in state and federal land agencies and other popular faller safety programs.

**Prereqs:** Instructor Permission

## **FOR 211 Logging Safety and Emergency Preparedness (2 credits)**

Logging safety and emergency preparedness is an integral component of all forest operations due to the inherent risk associated with the logging, trucking, and forest products industries. Course examines the human and environmental components of risk management, worker safety and emergency response, including personal wellness, safety considerations for mechanized logging operations, natural hazard recognition and mitigation, and workplace communications. Industry specific first-aid and CPR training will also be covered. Typically Offered: Fall.

## **FOR 220 Forest Biology & Dendrology (3 credits)**

Phylogenetic approach to understanding the systematics, morphology, geography, and ecology of the major species of North American woody plants. Includes identification and classification of important tree species of North American and other important woody plants of the Pacific Northwest and northern Rocky Mountains. Recommended preparation BIOL 114. Typically Offered: Fall.

## **FOR 221 Principles of Ecology (3 credits)**

Cross-listed with REM 221, WLF 220

Principles of ecology and their relevance to management of natural resources. Major topics include plant and wildlife population, community, ecosystem, and landscape level processes and how these processes interact with the environment. Exploration of how ecosystems are affected by humans and global change. Introduction to the types of questions asked by ecologists, the principal concepts and theories that guide ecological inquiry, and the methods that are used to answer ecological questions. Both terrestrial and aquatic systems are considered. Typically Offered: Spring.

**Prereqs:** BIOL 102/BIOL 102L or BIOL 114 or BIOL 115 or PLSC 205; or Permission.

## **FOR 230 Forest Operations I (2 credits)**

Overview of the primary equipment and harvesting systems used in modern forest operations. Both regionally, nationally, and internationally relevant harvest systems will be examined. Management implications for harvest system selection, infrastructure development, and relationships with subsequent components of the forest products industry will be discussed. There are 2-3 early morning trips. Early 8-Week Course. Typically Offered: Fall. Cooperative: open to WSU degree-seeking students.

## **FOR 231 Low Volume Forest Roads (2 credits)**

Joint-listed with FOR 431

Design and field layout of access roads for forest management, through a combination of field labs and use of modern, GIS-based forest road engineering software. Field study includes design of at least one current industry or agency forest road design project. There are 2-3 early morning trips and one Saturday field lab. Requires additional project for upper-division credit. Typically Offered: Fall.

**Coreqs:** FOR 230 or Permission

## **FOR 235 Society and Natural Resources (3 credits)**

General Education: Social and Behavioral Ways of Knowing

Cross-listed with NRS 235

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-hr small discussion group meeting per week.

**FOR 236 Steep Slope Logging Systems (2 credits)**

Joint-listed with FOR 436

Overview of the major cable logging and tethered logging systems. Physical mechanics of cable systems, including analysis of forces, tensions, and payload capacity. Field layout and analysis of cable corridors using integrated field planning and GIS-based cable system design software. There are 2-3 early morning trips and one Saturday field lab. Requires additional project for upper-division credit. Typically Offered: Spring.

**Prereqs:** FOR 230

**FOR 251 Nursery Insects and Disease (2 credits)**

Course examines the principles and practices of diagnosing and treating common insects and diseases affecting forest and rangeland plants in nurseries and greenhouses, including the application of pesticides. Typically Offered: Fall.

**FOR 255 Nursery Irrigation and Fertilization (1 credit)**

An introduction to nursery irrigation and fertilization practices commonly found in forest tree seedling and native plant nurseries. This course aims to provide some of the important theory behind the practices used every day in successful crop production. The course will be taught by faculty and staff at the UI Pitkin Forest Nursery and managed as part of the annual Position Description process. The course is developed and is presently offered online.

**FOR 257 Sustainable Nursery Design and Management (3 credits)**

Course focuses on the principles of sustainable nursery management, marketing and production operations of commercial nurseries with an emphasis on nursery and greenhouse facilities and practices necessary to produce bare root or container nursery stock. Typically Offered: Spring.

**FOR 272 Forest Mapping and GIS Applications (2 credits)**

Methods and techniques for surveying, mapping, and navigation in forested environments using traditional tools and advanced technologies. Concepts include field surveying, orienteering, industry relevant GIS applications, and real-time mobile mapping processes and technologies. This course includes 2-3 early morning field trips. Typically Offered: Spring.

**FOR 274 Forest Measurement and Inventory (3 credits)**

Practical techniques for the design and execution of vegetation measurements for the inventory of forests, understory, and fire-fuels. Course offered in fall and summer. Summer offering is an intensive three-week course held at the University of Idaho McCall Field Campus in McCall, Idaho. Field trips occur frequently to provide hands-on training in forest measurement techniques. Typically Offered: Fall and Summer.

**Prereqs or Coreqs:** MATH 143 and MATH 144; or SAT math score of 610 or above, or ACT math score of 27 or above

**FOR 275 Forestry Resource Sampling (2 credits)**

Principles and practice of natural resource inventory, forest sampling and data analysis techniques, LIDAR, forest growth, and quantitative decision support. Lab analysis examples and use of Excel and statistical packages are integrated into lectures. Field trips required.

**Coreqs:** FOR 274 and STAT 251

**FOR 293 Business of Forestry (2 credits)**

Joint-listed with FOR 493

Technical assessment of forestry from a business perspective at the stand and landscape levels, including an examination of factors that affect public and private landowner decision making regarding management of timberland. Course integrates concepts from silviculture, forest management, and natural resource policy into decision making framework. Requires additional project for upper-division credit.

**FOR 296 Forest Harvesting Practicum (3 credits)**

General Education: Senior Experience

Field-based practicum focused on the planning, implementation, and assessment of manual and mechanized forest operations. Operational considerations for meeting silvicultural prescriptions and maintaining sustainable forest practices will be examined. This course also offers an introduction to the operation and servicing of modern mechanized logging equipment. Classes and field exercises will occur primarily on the University of Idaho Experimental Forest. Typically Offered: Fall.

**Prereqs:** FOR 211

**FOR 298 Forest Technology Internship (1 credit)**

Paid or unpaid employment in forest industry at an approved facility or organization structured to provide varied occupational experiences.

**FOR 299 (s) Directed Study (1-16 credits)**

Credit arranged

**FOR 324 Forest Regeneration (3 credits)**

Natural and artificial regeneration of forest ecosystems; reproduction methods; selection of seed source and stock type; nursery cultural practices; tree improvement; site preparation methods to establish regeneration. One lecture and one 2-hr lab per week. Two all day field trips. A semester-long project requires time spent weekly in a nursery to regularly monitor plant development under varied environmental conditions (approximately 45 hours over the 18-week spring semester in addition to lectures, labs and out-of-class studying). Cooperative: open to WSU degree-seeking students.

**Coreqs:** FOR 274

**FOR 330 Terrestrial Ecosystem Ecology (4 credits)**

Ecosystem ecology integrates the interactions between organisms and their environment as a complex system, quantifying the biological and physical factors controlling ecosystem processes. Emphasis is on terrestrial ecosystems, particularly carbon, water, and nutrient cycling. Process-based modeling is used to illustrate effects of complex interactions on carbon budgets. Applications include effects of disturbance (fire, pests, climate change, and land management) on ecosystem productivity, biodiversity, and resilience. Two lectures and one lab per week, including field trips.

**Prereqs:** MATH 143 or MATH 160; PHYS 100 and PHYS 100L or PHYS 111 and PHYS 111L; and FOR 221 or REM 221 or WLF 220 or BIOL 213 or PLSC 102

**FOR 375 Fundamentals of Geomatics (3 credits)**

Cross-listed with NRS 375

Methods and techniques for obtaining quantitative and qualitative geospatial information from aerial and satellite images, maps, and the Global Positioning System for input into geographic information systems. Analysis of geospatial data for mapping, monitoring and planning associated with all aspects of natural resource management. Two lectures and one 2-hour lab per week. Typically Offered: Fall, Spring.

**Prereqs:** College Algebra

**FOR 398 (s) Renewable Natural Resources Internship (1-16 credits)**

Credit arranged. Supervised field experience with an appropriate public or private agency. Required for cooperative education students. Graded P/F.

**Prereqs:** Permission of department

**FOR 400 (s) Seminar (1-16 credits)**

Credit arranged

**FOR 403 (s) Workshop (1-16 credits)**

Credit arranged

**FOR 404 (s) Special Topics (1-16 credits)**

Credit arranged

**FOR 405 (s) Professional Development (1-16 credits)**

Credit arranged. Professional education and enrichment of forestry personnel. Credit earned in this course will not be accepted toward graduate degree programs but may be used for undergraduate programs.

**Prereqs:** Permission

**FOR 410 Fire Effects and Management (3 credits)**

Understanding fire effects is a very important part of fire management. This course will discuss the direct and indirect effects of fire on humans, soils, water, plants, and animals. In addition to learning the concepts surrounding fire effects, students will complete a literature review on an area of interest and will experience fire effects firsthand in the field. Recommended preparation – FOR 221 or WLF 220.

**FOR 416 Hydrologic Effects of Forest Management (1 credit)**

Joint-listed with FOR 516, WR 516

Evaluation and discussion of how management activities affect hydrological processes, flow regimes, and water quality in forested watersheds. Seminar based on primary literature. Recommended preparation: Basic knowledge of hydrology. Additional assignments and exams required for graduate credit Graded Pass/Fail. Typically Offered: Spring (Even Years).

**FOR 424 Silviculture Principles and Practices (4 credits)**

General Education: Senior Experience

Theory underlying silvicultural practices to control forest composition and growth, including forest stand dynamics, tree growth and quality, and growth-density relationships. Study of intermediate stand treatments and reproduction methods. Final project required involving field data collection and forest modeling to develop and mark silvicultural prescriptions. 3 hours of lecture and 2 hours of lab per week.

**Prereqs:** Senior standing and FOR 274, FOR 220 or other plant identification course, FOR 324, FOR 330, or Instructor Permission

**FOR 431 Low Volume Forest Roads (2 credits)**

Joint-listed with FOR 231

Design and field layout of access roads for forest management, through a combination of field labs and use of modern, GIS-based forest road engineering software. Field study includes design of at least one current industry or agency forest road design project. There are 2-3 early morning trips and one Saturday field lab. Requires additional project for upper-division credit. Typically Offered: Fall.

**Coreqs:** FOR 230 or Permission

**FOR 436 Steep Slope Logging Systems (2 credits)**

Joint-listed with FOR 236

Overview of the major cable logging and tethered logging systems. Physical mechanics of cable systems, including analysis of forces, tensions, and payload capacity. Field layout and analysis of cable corridors using integrated field planning and GIS-based cable system design software. There are 2-3 early morning trips and one Saturday field lab. Requires additional project for upper-division credit. Typically Offered: Spring.

**FOR 439 Forest Operations II (2 credits)**

Overview of the field design, layout, and administration of timber harvesting operations, production and cost estimation, laws, best management practices, and hazard management. A brief introduction to quantitative forest planning methods is also provided. There are 2-3 early morning trips and one Saturday field lab. Late 8-week course. Typically Offered: Fall.

**Prereqs:** FOR 230 Cooperative: open to WSU degree-seeking students.

**FOR 443 Forest Production Ecology (3 credits)**

Joint-listed with FOR 543

Considers how plant production, carbon and energy accumulation are influenced by availability of light, water and nutrient resources. Includes study of use efficiency, allocation, and turnover of captured resources at organ, tree and stand level that are applicable to increased management intensity. Examples emphasize forests but include other wildland and agricultural ecosystems. Stand-level process models are used to synthesize understanding of environmental and management factors controlling forest production. Two 1-hour lectures and one 3-hour lab per week. Requires additional research project and presentation for graduate credit. Typically Offered: Varies.

**Prereqs:** FOR 221, WLF 221, or REM 221; SOIL 205, SOIL 206

**FOR 443L Forest Production Ecology Lab (1 credit)**

Joint-listed with FOR 543L

Practical lab activities associated with forest production ecology and companion laboratory with FOR 443. One 3-hour lab per week. Requires additional effort for graduate credit. Typically Offered: Fall.

**Prereqs or Coreqs:** FOR 443

**FOR 444 Prescribed Fire For Ecologically-Based Management (2-3 credits)**

Learn about prescribed burning in support of ecologically-based management through reading, discussion and participating in hands-on service learning, planning, conducting and monitoring prescribed burns, reading and discussing local ecology and management, working collaboratively, and developing skills in fire management. Course requires travel as well as pre-, during-, and post-travel writing, discussion, and presentations. Typically Offered: Spring.

**Prereqs:** Instructor Permission

**FOR 447 Woody Plant Physiology (3 credits)**

Joint-listed with FOR 547

Examine woody plant interactions with their environment and tolerance or avoidance of stress. This course covers quantitative analysis of environmental biophysics, gas exchange, water relations and nutrition in woody plants. Students will also learn to use all of the major methods/equipment used in woody plant physiology research. Includes two weekly 1-hour lectures and one weekly 3-hour lab. Students registered for 500-level credit must complete a research project and presentation in addition to the requirements for the 400-level credit.

**FOR 448 Plant Population Ecology (4 credits)**

Ecological aspects of plant form and reproduction; demography and population modeling; species interactions, including competition, mutualism, and herbivory. Typically Offered: Fall.

**Prereqs:** FOR 221/WLF 220

**FOR 460 Mountain Ecology (3 credits)**

Joint-listed with FOR 560

This interdisciplinary course uses frameworks grounded in ecosystem ecology and insular biogeography theory to examine the influence of mountains on population and community ecology, including interconnected social, biological, and physical components. There will be an emphasis on morphological, physiological, and behavioral adaptations of terrestrial and aquatic organisms. Other topics may include orogeny, geomorphology, human dimensions, biogeography, diversification, adaptive pressures, speciation, climatology, and climate change. Topics presented will apply to mountain systems universally; however, much of the emphasis is placed on issues within the Western United States. Additional projects and assignments required for graduate credit. Typically Offered: Fall and Summer.

**FOR 461 Ecophysiology Lab (3 credits)**

A lab-based course studying functional responses and adaptations of individual species to their environment, emphasizing the physiological mechanisms that influence the interactions between organisms and the major environmental factors (e. g. , solar radiation, energy balance, temperature, water and nutrients, climate), and how this affects the interactions among species and their growth and survival (e. g. , competition, herbivory, and allelopathy). Typically Offered: Spring.

**Prereqs:** FOR 221/WLF 220

**FOR 462 Watershed Science and Management (3 credits)**

Influence of land management practices on hydrologic processes, water quality, and riparian habitat w/emphasis on wildland watersheds. One day field trip.

**Prereqs:** MATH 143; and PHYS 100/PHYS 100L or PHYS 111/PHYS 111L, or high school equivalent.

**FOR 468 Forest and Plant Pathology (2 credits)**

A survey of plant diseases. Emphasis on forest trees and other woody plants. Organisms that cause diseases. Strategies to minimize negative effects. Symbiotic roles of microbes in plants. Two hours of lecture, and two hours of lab per week, in addition to multiple field trips (as weather allows) to observe diseases and their effects. (Spring only)

**Prereqs:** FOR 220 and FOR 330

**FOR 472 Remote Sensing of the Environment (4 credits)**

Cross-listed with NRS 472

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 143. Typically Offered: Fall. Cooperative: open to WSU degree-seeking students.

**FOR 473 ECB Senior Presentation (1 credit)**

General Education: Senior Experience

Cross-listed with FISH 473, FSP 473

, NRS 473, REM 473, WLF 473. Reporting and presenting the senior project (thesis or internship); taken after or concurrently with REM 497. Serves as the senior capstone course for Ecology and Conservation Biology (ECB).

**Prereqs:** Instructor Permission

**FOR 484 Forest Policy and Administration (2 credits)**

Cross-listed with NRS 484

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 235.

**Prereqs:** Junior standing.

**FOR 490 The Resilient Landscape (3 credits)**

General Education: Senior Experience

Cross-listed with LARC 480

A capstone course addressing the concept of trade-offs in coupled social ecological technological systems, where landscapes and the communities they support are adaptive and evolving but the ideal is rarely attainable. This is a reading, critical thinking and discussion course with assessment based on class participation in a term project, problem solving, verbal and written communication, collegiality, and collaboration. Typically Offered: Spring.

**Prereqs:** ENGL 102 and Junior standing

**FOR 493 Business of Forestry (2 credits)**

Joint-listed with FOR 293

Technical assessment of forestry from a business perspective at the stand and landscape levels, including an examination of factors that affect public and private landowner decision making regarding management of timberland. Course integrates concepts from silviculture, forest management, and natural resource policy into decision making framework. Requires additional project for upper-division credit.

**FOR 497 (s) Senior Thesis (1-4 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. 20 GPA or Permission

**FOR 498 (s) Renewable Natural Resources Internship (1-16 credits)**

Credit arranged. Supervised field experience with an appropriate public or private agency. Required for cooperative education students.

**Prereqs:** Permission of department

**FOR 499 (s) Directed Study (1-16 credits)**

Credit arranged. For the individual student; conferences, library, field, or lab work.

**FOR 500 Master's Research and Thesis (1-16 credits)**

Credit arranged

**FOR 501 (s) Seminar (1-16 credits, max arranged)**

Presentations and discussion of current research in the academic disciplines embraced by the Department of Forest, Rangeland and Fire Sciences. Typically Offered: Fall and Spring.

**Prereqs:** Permission

**FOR 502 (s) Directed Study (1-16 credits)**

Credit arranged

**FOR 503 (s) Workshop (1-16 credits)**

Credit arranged Selected topics in the conservation and management of natural resources.

**Prereqs:** Permission

**FOR 504 (s) Special Topics (1-16 credits)**

Credit arranged

**FOR 505 (s) Professional Development (1-16 credits)**

Credit arranged

**FOR 514 Forest Biometrics (3 credits)**

This course provides a broad overview of forest biometrics, including forestry-specific sampling approaches, development of allometric relations, and use of remote sensing datasets.

**Prereqs:** STAT 431 or equivalent

**FOR 515 Physical Hydrology (3 credits)**

A quantitative treatment of the physical processes that control water fluxes in the environment. Specific emphasis on evaporation, transpiration, snow processes and soil water flow. (Fall, alt/years)

**FOR 516 Hydrologic Effects of Forest Management (1 credit)**

Cross-listed with WR 516

Joint-listed with FOR 416

Evaluation and discussion of how management activities affect hydrological processes, flow regimes, and water quality in forested watersheds. Seminar based on primary literature. Recommended preparation: Basic knowledge of hydrology. Additional assignments and exams required for graduate credit Graded Pass/Fail. Typically Offered: Spring (Even Years).



**FOR 522 Belowground Processes (3 credits)**

Belowground Processes considers current advancements in understanding of root growth and development, water and nutrient acquisition, rhizosphere functions, soil microbial community composition and functions, organic matter decomposition, and symbiotic associations between plants and microbes. Examples focus mainly on forest and wildland terrestrial ecosystems. Students learn various techniques for studying belowground processes and apply them in self-directed, hypothesis-driven projects. Offered every other year during fall semester.

**Prereqs:** Graduate standing or instructor permission

**FOR 535 Remote Sensing of Fire (3 credits)**

Joint-listed with FIRE 435

The course describes the state of the art algorithms and methods used for mapping and characterizing fire from satellite observations. The course will link the physical aspects of fire on the ground with the quantities that can be observed from remote sensing, and present an overview of the different aspects of environmental fire monitoring. The course will be accompanied by weekly lab sessions focused on the processing of satellite data from sensors used operationally for fire monitoring. This course assumes that you are familiar with the fundamental concepts of mathematics and physics, understand basic remote sensing techniques, and can use maps and GIS data layers. For graduate credit, additional literature review and a class project including evaluation of new, advanced technologies is required. (Spring) Typically Offered: Spring.

**FOR 543 Forest Production Ecology (3 credits)**

Joint-listed with FOR 443

Considers how plant production, carbon and energy accumulation are influenced by availability of light, water and nutrient resources. Includes study of use efficiency, allocation, and turnover of captured resources at organ, tree and stand level that are applicable to increased management intensity. Examples emphasize forests but include other wildland and agricultural ecosystems. Stand-level process models are used to synthesize understanding of environmental and management factors controlling forest production. Two 1-hour lectures and one 3-hour lab per week. Requires additional research project and presentation for graduate credit. Typically Offered: Varies.

**FOR 543L Forest Production Ecology Lab (1 credit)**

Joint-listed with FOR 443L

Practical lab activities associated with forest production ecology and companion laboratory with FOR 443. One 3-hour lab per week. Requires additional effort for graduate credit. Typically Offered: Fall.

**Prereqs or Coreqs:** FOR 443

**FOR 546 Science Synthesis and Communication (3 credits)**

This course is an online course only. Critically review science literature and write both brief and in-depth syntheses to address applied questions in science and management. Learn best practices for summarizing and communicating science effectively. Discuss challenges for application of science in management. Examples will focus on wildland fire science and management.

**FOR 547 Woody Plant Physiology (3 credits)**

Joint-listed with FOR 447

Examine woody plant interactions with their environment and tolerance or avoidance of stress. This course covers quantitative analysis of environmental biophysics, gas exchange, water relations and nutrition in woody plants. Students will also learn to use all of the major methods/equipment used in woody plant physiology research. Includes two weekly 1-hour lectures and one weekly 3-hour lab. Students registered for 500-level credit must complete a research project and presentation in addition to the requirements for the 400-level credit.

**FOR 560 Mountain Ecology (3 credits)**

Joint-listed with FOR 460

This interdisciplinary course uses frameworks grounded in ecosystem ecology and insular biogeography theory to examine the influence of mountains on population and community ecology, including interconnected social, biological, and physical components. There will be an emphasis on morphological, physiological, and behavioral adaptations of terrestrial and aquatic organisms. Other topics may include orogeny, geomorphology, human dimensions, biogeography, diversification, adaptive pressures, speciation, climatology, and climate change. Topics presented will apply to mountain systems universally; however, much of the emphasis is placed on issues within the Western United States. Additional projects and assignments required for graduate credit. Typically Offered: Fall and Summer.

**FOR 584 Natural Resource Policy Development (3 credits)**

This course is an online course only. The development of natural resource policy with emphasis on the policy process at the federal level in the U. S. ; the role of and interrelationships between staff, committees, agencies and elected officials; the relationship of science and scientists with policy and politicians in the development of natural resource policy, including preparation of testimony related to natural resource science and policy issues; implementation of policy within the natural resource agencies and judicial interpretation of major natural resource policies in the U. S. Recommended Preparation: An upper-division course in natural resource and/or environmental policy (Spring only)

**FOR 597 (s) Practicum (1-16 credits)**

Credit arranged

**FOR 598 (s) Internship (1-16 credits)**

Credit arranged

**FOR 599 (s) Non-thesis Master's Research (1-16 credits)**

Credit arranged. Research not directly related to a thesis or dissertation.

**Prereqs:** Permission

**FOR 600 Doctoral Research and Dissertation (1-45 credits)**

Credit arranged

**Prereqs:** admission to the doctoral program in Natural Resources and Department Permission

**FOR 601 (s) Seminar (1-16 credits)**

Credit arranged

**FOR 698 Internship (1-16 credits)**