

FORESTRY (FOR)

FOR 111, INTRODUCTION TO FORESTRY, 3 Credits

Forest resources in the world; forests and human well-being; where and how forests grow; environmental and human values; products, characteristics, and uses; basic elements of use, planning and management. Interpretation of forestry literature; professional origins in the U.S. Field trips required.

Equivalent to: F 111

Available via Ecampus

FOR 112, COMPUTING APPLICATIONS IN FORESTRY, 3 Credits

An overview of computing applications used in all aspects of forestry work, but largely focused on development of intermediate and advanced spreadsheet skills using Microsoft Excel (e.g., complex formulas and functions, charting, and pivot tables). Additionally, the course rounds out essential skills in document formatting and presentation development.

FOR 199, SPECIAL STUDIES, 1-16 Credits

This course is repeatable for 16 credits.

FOR 206, *FOREST SOILS LABORATORY FOR SOIL 205, 1 Credit

Laboratory exercise and field trips designed to develop student competency in soil processes, description, analysis, and assessment with a particular emphasis on the role of soils in managed and unmanaged forest ecosystems. (Bacc Core Course if taken with SOIL 205)

Attributes: CPBS – Core, Pers, Biological Science; CPPS – Core, Pers, Physical Science

Corequisites: SOIL 205

FOR 208, FOREST SOILS RECITATION, 1 Credit

Readings, exercises, discussions designed to develop student competency in forest soil processes, description, analysis, and assessment. A particular emphasis will be placed on the role of soils in managed and unmanaged forest ecosystems.

Recommended: An introductory soils course.

Available via Ecampus

FOR 307, JUNIOR SEMINAR, 1 Credit

College is the time to develop the skills necessary for the transition between academics and career. In conjunction with the expertise already available on campus, this course will guide students through career planning, exploration, placement, and employer expectations. CROSSLISTED as FE 307/FOR 307.

Equivalent to: FE 307

FOR 312, FORESTRY FIELD SCHOOL, 2 Credits

A hands-on experience in the major aspects of forestry, including regeneration surveys, silviculture, cruising, recreation, forest disturbances, logging site and mill visits, east and west of the Cascades Range. CROSSLISTED as FE 312/FOR 312.

Equivalent to: FE 312

FOR 321, FOREST MENSURATION, 5 Credits

Encompasses methods used to measure tree, stand and forest-level attributes, and sample and analyze forest resources data. Provides information that support forest management decisions at the stand and forest levels. Focuses mainly on quantitative analysis of forest vegetation. Uses considerable time and effort on measuring other forest resources (e.g., wildlife habitat and riparian zones).

Prerequisite: (FOR 141 with C or better or FES 141 with C or better or FOR 241 with C or better or FES 241 with C or better) and FE 208 [C] and (MTH 241 [C] or MTH 245 [C] or MTH 251 [C] or MTH 251H [C]) and (ST 201 [C] or ST 314 [C] or ST 314H [C] or ST 351 [C] or ST 351H [C])

FOR 322, FOREST MODELS, 3 Credits

Introduction to static and dynamic forest models: defining what they are, how they might be used, and, in general terms, how they are developed.

Prerequisite: FOR 321 with C- or better and MTH 241 [D-] and (ST 201 [D-] or ST 351 [D-])

Equivalent to: F 322

FOR 329, FOREST RESOURCE ECONOMICS I, 4 Credits

Forest products markets, appraisal, rotation, thinning, uneven-aged management and forest regulation. Economics of timber management and harvest scheduling.

Prerequisite: ST 201 with D- or better or ST 351 with D- or better

Equivalent to: FOR 331

FOR 330, FOREST RESOURCE ECONOMICS II, 4 Credits

Basic arithmetic of interest and capital budgeting. Basic wood products markets. Forest resource markets and market failures. Nonmarket valuation and multiple-use forestry. Impacts of forest management and policy decisions on forest resource use. Lec/lab.

Prerequisite: (AEC 250 with C or better or (ECON 201 with C or better or ECON 201H with C or better)) and (MTH 241 [C] or MTH 245 [C] or (MTH 251 [C] or MTH 251H [C]))

Equivalent to: FOR 430

FOR 346, TOPICS IN WILDLAND FIRE, 3 Credits

An interdisciplinary survey of concepts relating to fire science, ecology, management, and policy. Includes case studies of several representative ecosystems, ranging from west- and eastside forests of the Pacific Northwest to shrub steppe ecosystems of the Intermountain West and chaparral ecosystems of southern California. Distance and campus-based delivery using videos, website, and discussion.

Equivalent to: FW 346, RNG 346

Recommended: Coursework in forest biology or ecology (eg. FOR 240 or FES 240 or FES 341)

Available via Ecampus

FOR 399, SPECIAL TOPICS, 0-16 Credits

Equivalent to: FOR 399H

This course is repeatable for 16 credits.

FOR 399H, SPECIAL TOPICS, 1-16 Credits

Attributes: HNRS – Honors Course Designator

Equivalent to: FOR 399

This course is repeatable for 16 credits.

FOR 401, RESEARCH AND SCHOLARSHIP, 1-16 Credits

Equivalent to: F 401

This course is repeatable for 16 credits.

FOR 403, THESIS, 1-16 Credits

This course is repeatable for 16 credits.

FOR 405, READING AND CONFERENCE, 1-16 Credits

Equivalent to: F 405, FRR 405

This course is repeatable for 16 credits.

FOR 406, PROJECTS, 1-16 Credits

Section 4: Integrated Projects, Graded.

Equivalent to: F 406, FRR 406

This course is repeatable for 16 credits.

FOR 407, SEMINAR, 1-16 Credits

Equivalent to: F 407, FRR 407

This course is repeatable for 16 credits.

FOR 408, WORKSHOP, 1-3 Credits

Equivalent to: FRR 408

This course is repeatable for 16 credits.

FOR 410, INTERNSHIP, 1-16 Credits

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of university and agency personnel. Graded P/N.

Equivalent to: FRR 410

This course is repeatable for 16 credits.

FOR 413, FOREST PATHOLOGY, 3 Credits

Effects of diseases on forest ecosystems. Recognition of important groups, prediction of pathogen responses to environmental changes, and management strategies for protection of forest resources. Field trips. Lec/lab. CROSSLISTED as BOT 413/FOR 413.

Prerequisite: BI 204 with C or better or BI 212 with C or better or BI 212H with C or better or BI 213 with C or better or BI 213H with C or better or BI 221 with C or better or BI 221H with C or better

Equivalent to: BOT 413

FOR 417, ADVANCED FOREST SOILS, 4 Credits

Synthesize current information on fundamental properties and processes of forest soils with emphasis on applications to silviculture, soil conservation, and sustainable management of forested ecosystems. Lec/lab.

Prerequisite: SOIL 205 with C- or better and ((CH 231 with C- or better or CH 231H with C- or better) and (CH 261 [C-] or CH 261H [C-]) or CH 201 [C-]) and (MTH 241 [C-] or MTH 251 [C-] or MTH 251H [C-] or MTH 252 [C-] or MTH 252H [C-])

Equivalent to: FOR 417X

FOR 431, ECONOMICS AND POLICY OF FOREST WILDLAND FIRE, 3 Credits

General overview of the history of fire and the interaction of people with fire on forested landscapes. Forest fire policy history and current issues in the U.S. Basic legal concepts relevant to forest fire policy. An economic framework for understanding spatial externalities, decision-making under certainty, institutional economics, and incentives.

Prerequisite: AEC 351 with C or better or AEC 352 with C or better or FOR 330 with C or better or ECON 352 with C or better

Available via Ecampus

FOR 436, WILDLAND FIRE SCIENCE AND MANAGEMENT, 4 Credits

Principles and applications of fire as a natural resource management tool; the role of fire in conservation management, restoration, and preservation of ecosystems. Covers basic techniques and current research used to describe fire behavior and spread, fuels and fuel manipulation, and fire effects on the biota. Focus will be on fire as a natural process in ecosystem dynamics. Lec/lab.

Equivalent to: FW 436, RNG 436

Available via Ecampus

FOR 441, SILVICULTURE PRINCIPLES, 4 Credits

Nursery operation, vegetation management, herbivores, fire, seeding and planting techniques. Introduction to principles and techniques involving vegetation control, thinning, fertilizing, and harvesting. Environmental considerations related to forest stand treatments. Lec/lab.

Prerequisite: (FES 240 with C or better or FOR 240 with C or better) and (FES 141 [C] or FES 241 [C])

FOR 442, SILVICULTURE REFORESTATION, 4 Credits

Silvicultural principles and practices needed to successfully regenerate forestlands in North America. Topics include artificial and natural regeneration, genetic improvement, seed orchards, forest tree nurseries, site preparation, seedling quality and handling, vegetation management, animal damage protection, early stand management, and ecological and ecophysiological considerations. Emphasis is placed on regeneration methods applied to plantations in western Oregon. Field trips required.

Prerequisite: SOIL 205 with C or better and (FES 240 [C] or FES 240H [C] or FOR 240 [C])

Corequisites: FOR 443

FOR 443, SILVICULTURAL PRACTICES, 4 Credits

Manipulation of forest stand structure and dynamics to meet various resource management objectives. Covers key concepts and practices associated with vegetation control, thinning, fertilization, even-aged and uneven-aged regeneration systems including social and environmental considerations associated with treatments. Two-day field trip required. Lec/lab.

Prerequisite: (FES 240 with C or better or FES 240H with C or better or FOR 240 with C or better) and FOR 321 [C]

Corequisites: FOR 442

FOR 456, *INTERNATIONAL FORESTRY, 3 Credits

An introduction to the biological, physical, and sociological factors that shape the world's forests and the activities used to manage those forests. What influence these factors have on forest policies, practices, and outcomes. CROSSLISTED as FE 456/FOR 456. (Bacc Core Course)

Attributes: CSGI – Core, Synth, Global Issues

Equivalent to: FE 456

Recommended: Introductory course in biology.

FOR 457, TECHNIQUES FOR FOREST RESOURCE ANALYSIS, 4 Credits

Use of linear programming, nonlinear programming, dynamic programming, and simulation to solve complex forest management problems, with emphasis on intertemporal multiple-use scheduling. Forestry transportation problems, multiple-use allocation, and investment analysis. Field trips required. CROSSLISTED as FE 457/FOR 457 and FE 557/FOR 557.

Prerequisite: FOR 329 with C or better and FOR 441 [C] and FOR 443 [C]

Equivalent to: FE 457

FOR 459, FOREST MANAGEMENT PLANNING AND DESIGN I, 4 Credits

Integration of environmental, economic, and social aspects of forestry in management planning. Development of strategic and tactical plans using diverse data types and sources. Senior capstone class projects. Lec/lab. CROSSLISTED as FE 459/FOR 459.

Prerequisite: FE 457 with C or better or FOR 457 with C or better

Equivalent to: FE 459

FOR 460, ^FOREST POLICY, 4 Credits

Policy formulation and analysis for forest resources. Consideration of policy affecting land management approaches to planning, management, and social and economic development. Major forestry policy areas covered include outdoor recreation, range, timber, wilderness, and wildlife and fish. Lec/lab. (Writing Intensive Course)

Attributes: CWIC – Core, Skills, WIC

FOR 462, NATURAL RESOURCE POLICY AND LAW, 3 Credits

First of two offerings designed to provide an introduction to current environmental and natural resource law issues and disputes for students who will have to meet, consult, and work with lawyers throughout their professional career. Focus is on mechanisms governing resource allocation within the constraints of private property rights. Emphasis is placed on the federal Endangered Species Act and its relation to water allocation and public trust doctrines. Students will also gain a broad understanding of regulatory

FOR 469, FOREST MANAGEMENT PLANNING AND DESIGN II, 4 Credits

A team-based, project-centric course for integrated timber harvest planning. Establish tactical and operational planning goals and constraints, identify feasible harvesting and transportation systems, and design harvest units to meet objectives and constraints. Lec/lab. CROSSLISTED as FE 469/FOR 469.

Prerequisite: FE 459 with C or better or FOR 459 with C or better

Equivalent to: FE 469

FOR 499, SPECIAL TOPICS, 0-16 Credits

Topics of current importance in forest resources issues, education, policies, economics, management, business, social values, silviculture, and biometrics. Topics will change from term to term. May be repeated with different topics for credit. Section 8: Social aspects of natural resource management (3 credits) graded.

This course is repeatable for 16 credits.

Available via Ecampus

FOR 501, RESEARCH AND SCHOLARSHIP, 1-16 Credits

Equivalent to: F 501

This course is repeatable for 16 credits.

FOR 503, THESIS, 1-16 Credits

Equivalent to: F 503

This course is repeatable for 999 credits.

FOR 505, READING AND CONFERENCE, 1-16 Credits

Equivalent to: F 505, FRR 505

This course is repeatable for 16 credits.

FOR 506, PROJECTS, 1-16 Credits

Equivalent to: F 506

This course is repeatable for 16 credits.

FOR 507, SEMINAR, 1-16 Credits

Equivalent to: F 507, FRR 507

This course is repeatable for 16 credits.

FOR 508, WORKSHOP, 1-3 Credits

This course is repeatable for 16 credits.

FOR 510, INTERNSHIP, 1-9 Credits

This course is repeatable for 16 credits.

FOR 513, FOREST PATHOLOGY, 3 Credits

Effects of diseases on forest ecosystems. Recognition of important groups, prediction of pathogen responses to environmental changes, and management strategies for protection of forest resources. Field trips. Lec/lab. CROSSLISTED as BOT 513/FOR 513.

Equivalent to: BOT 513

Recommended: BI 204 or BI 212 or BI 212H or BI 213 or BI 213H

FOR 517, ADVANCED FOREST SOILS, 4 Credits

Synthesize current information on fundamental properties and processes of forest soils with emphasis on applications to silviculture, soil conservation, and sustainable management of forested ecosystems. Lec/lab.

Recommended: SOIL 205 and (((CH 231 or CH 231H) and (CH 261 or CH 261H)) or CH 201) and (MTH 241 or MTH 251 or MTH 251H or MTH 252 or MTH 252H) all with a minimum grade of C-

FOR 518, MANAGING FOREST NUTRITION, 3 Credits

Synthesize current information on nutrient limitations of forest productivity, long-term forest productivity, and mitigating and managing forest nutrition with emphasis on forests of the Pacific Northwest.

FOR 520, GEOSPATIAL FOREST ANALYSIS, 3 Credits

Review of passive and active sensors used in remote sensing. Geospatial data manipulation in R Image classification. Point clouds: lidar and photogrammetric. Point cloud manipulation for forestry application. Sampling for accuracy assessment. Lec/lab.

Prerequisite: FE 444 with C or better or GEOG 480 with C or better

FOR 524, FOREST BIOMETRICS, 3 Credits

Advanced topics in forest biometrics, including measurement of forest structure and dynamics, application of sampling theory and methods, and statistical techniques for interpreting forestry data.

Equivalent to: F 524

Recommended: FOR 322 and ST 511

FOR 525, FOREST MODELING, 3 Credits

Examination of regression techniques and assumptions used to develop static and dynamic equations of tree and stand attributes.

Prerequisite: ST 552 with C or better

Equivalent to: F 525

FOR 528, PROFESSIONAL COMMUNICATION AND ETHICS, 2 Credits

Conventions of written and oral communication in forestry and related disciplines including basic narrative development. Exploration of environmental, professional, and research ethics, and the role they play in effective communication with multiple stakeholders.

FOR 531, ECONOMICS AND POLICY OF FOREST WILDLAND FIRE, 3 Credits

General overview of the history of fire and the interaction of people with fire on forested landscapes. Forest fire policy history and current issues in the U.S. Basic legal concepts relevant to forest fire policy. An economic framework for understanding spatial externalities, decision-making under certainty, institutional economics, and incentives.

Recommended: FOR 330 or AEC 351 or AEC 352 or ECON 352

Available via Ecampus

FOR 534, ECONOMICS OF THE FOREST RESOURCE, 3 Credits

Topics include optimal stand and forest management for timber production, economics of ecosystem services (e.g. recreation, biodiversity, carbon sequestration, water quality and regulation), non-market valuation methods, management under risk and uncertainty, discounting, intergenerational equity, sustainability, international trade and other global issues.

Recommended: FOR 330 and FOR 331

FOR 536, WILDLAND FIRE SCIENCE AND MANAGEMENT, 4 Credits

Principles and applications of fire as a natural resource management tool; the role of fire in conservation management, restoration, and preservation of ecosystems. Covers basic techniques and current research used to describe fire behavior and spread, fuels and fuel manipulation, and fire effects on the biota. Focus will be on fire as a natural process in ecosystem dynamics. Lec/lab.

Equivalent to: FW 536, RNG 536

FOR 542, INTERNATIONAL INTENSIVE SILVICULTURE, 2 Credits

Operational and ecological aspects of intensive silvicultural management of planted forests around the world. Guest speakers in different countries will describe the type of silvicultural management that is carried out in the speaker's country from species and genetic selection, to harvest and rotation length, including site preparation and planting techniques. Emphasis on comparing silvicultural practices in each country to the management of plantations in western Oregon.

FOR 543, SILVICULTURAL PRACTICES, 5 Credits

Manipulation of immature and mature forest stands for various resource management objectives. Principles and techniques involving vegetation control, thinning, fertilizing, and harvesting. Environmental considerations related to stand treatments. Two-day field trips required.

Recommended: (FOR 240 or FES 240) and FOR 321 and concurrent enrollment in FOR 429

FOR 549, SILVICULTURAL INFLUENCES ON FOREST ECOSYSTEM DYNAMICS, 3 Credits

Fundamental biological and ecological principles for the design and implementation of silvicultural regimes that achieve a wide diversity of forest ecosystem management objectives.

Recommended: Undergraduate course in silviculture and in forest mensuration.

FOR 550, SUSTAINABLE FOREST MANAGEMENT, 3 Credits

Sustainable forestry as part of the global sustainability movement. History of sustainability and its influence on decision-making in forest management. Current dimensions of sustainability: forest certification, climate change, role of environmental ethics, biodiversity conservation, maintenance of long-term site productivity, conservation of soil and water resources, roles of social institutions, and links to concerns for social justice.

FOR 557, TECHNIQUES FOR FOREST RESOURCE ANALYSIS, 4 Credits

Use of linear programming, nonlinear programming, dynamic programming, and simulation to solve complex forest management problems, with emphasis on intertemporal multiple-use scheduling. Forestry transportation problems, multiple-use allocation, and investment analysis. Field trips required. CROSSLISTED as FE 457/FOR 457 and FE 557/FOR 557.

Equivalent to: FE 557

Recommended: FOR 329 and FOR 441 and FOR 443

FOR 561, FOREST POLICY ANALYSIS, 3 Credits

Basic elements of forest policy problems, including resource allocation and efficiency, distribution, and interpersonal equity, taxation, regulation, and control, and planning and uncertainty. Emphasis on policy and analysis and its uses in policy decision.

FOR 562, NATURAL RESOURCE POLICY AND LAW, 3 Credits

First of two offerings designed to provide an introduction to current environmental and natural resource law issues and disputes for students who will have to meet, consult, and work with lawyers throughout their professional career. Focus is on mechanisms governing resource allocation within the constraints of private property rights. Emphasis is placed on the federal Endangered Species Act and its relation to water allocation and public trust doctrines. Students will also gain a broad understanding of regulatory

FOR 563, ENVIRONMENTAL POLICY AND LAW INTERACTIONS, 3 Credits

Second of two offerings designed to provide an introduction to current environmental and natural resource law issues and disputes for students who will have to meet, consult, and work with lawyers throughout their professional career. Focus is on the arena of regulatory environmental laws. Environmental torts, regulation of point and non-point source pollution under the federal Clean Water Act, wetlands protection, and laws governing agricultural and forest practices will be examined as examples of regulatory frameworks for achieving resource protection. Students will be exposed to the basic framework of federal laws regulating air and hazardous waste pollutants.

FOR 599, SPECIAL TOPICS, 1-16 Credits

Topics of current importance in forest resources issues, education, policies, economics, management, business, social values, silviculture, and biometrics. Topics will change from term to term. May be repeated with different topics for credit. Section 8: Social aspects of natural resource management (3 credits) graded.

This course is repeatable for 16 credits.

Available via Ecampus

FOR 601, RESEARCH AND SCHOLARSHIP, 1-16 Credits

Equivalent to: F 601

This course is repeatable for 16 credits.

FOR 603, THESIS, 1-16 Credits

Equivalent to: F 603

This course is repeatable for 999 credits.

FOR 605, READING AND CONFERENCE, 1-16 Credits

Equivalent to: F 605

This course is repeatable for 16 credits.

FOR 606, PROJECTS, 1-16 Credits

Equivalent to: F 606

This course is repeatable for 16 credits.

FOR 607, SEMINAR, 1-16 Credits

Equivalent to: F 607

This course is repeatable for 16 credits.

FOR 699, SPECIAL TOPICS, 1-16 Credits

Topics of current importance in forest resources issues, education, policies, economics, management, business, social values, silviculture, and biometrics. Topics will change from term to term. May be repeated with different topics for credit.

This course is repeatable for 16 credits.

FOR 808, WORKSHOP, 1-9 Credits

This course is repeatable for 16 credits.