

FOREST & RANGELAND STEWARDSHIP-F (F)

Courses

F 101 Intro to Forest and Rangeland Stewardship Credit: 1 (1-0-0)

Course Description: Introduce both first year and transfer students to the faculty, and expertise within the department of Forest and Rangeland Stewardship. Gain an appreciation for the majors selected.

Prerequisite: None.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 209 Introduction to Forest and Rangeland Ecology Credits: 3 (3-0-0)

Course Description: Ecological concepts pertaining to natural resources and the management of forests and rangelands. Analysis of species, population, and community interactions within an applied framework.

Prerequisite: (BZ 100 to 199 - at least 3 credits or LIFE 100 to 199 - at least 3 credits) and (MATH 118 or MATH 120 or MATH 124 or MATH 125 or MATH 126 or MATH 127 or MATH 141 or MATH 155 or MATH 159 or MATH 160).

Registration Information: Credit allowed for only one of the following: F 209, LAND 220, LIFE 220 or LIFE 320.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 224 Wildland Fire Measurements Credit: 1 (0-2-0)

Course Description: Wildland fire control and use measurements: fuels, weather, topography, fire behavior, and fire ecology.

Prerequisite: None.

Registration Information: Required field trips.

Term Offered: Fall.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 230 Forestry Field Measurements Credits: 2 (0-4-0)

Course Description: Develop field skills using maps, compasses, and aerial photos; photo interpretation; tree and stand measurements; stand volume and value estimates.

Prerequisite: None.

Term Offered: Summer.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: Yes.

F 310 Forest and Rangeland Ecogeography Credits: 3 (2-2-0)

Also Offered As: RS 310.

Course Description: Distribution of wildland plant communities and identification of important grasses, forbs, shrubs, and trees common in North America.

Prerequisite: BZ 101 or BZ 104 or BZ 110 or BZ 120 or LIFE 102.

Registration Information: Must have concurrent registration in F 312.

Must register for lecture and laboratory. Credit not allowed for both F 310 and RS 310.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 311 Forest Ecology Credits: 3 (3-0-0)

Course Description: Relationships of ecological concepts to the dynamics of forest ecosystems.

Prerequisite: F 209 or LAND 220 or LIFE 220 or LIFE 320.

Terms Offered: Fall, Spring.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 312 Dendrology Credits: 2 (1-2-0)

Course Description: Identification, classification, nomenclature, morphology, phenology, ecology, geographic ranges, and natural history of trees. Explore the historical and current importance of trees to society. Focus on major forest tree species of North America, and includes several exotic species that commonly occur in urban areas.

Prerequisite: BZ 120.

Registration Information: Required field trips.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 313 Dendrology and Herbaceous Plant ID Credits: 3 (2-2-0)

Also Offered As: RS 313.

Course Description: Identification, classification, nomenclature, morphology, phenology, ecology, geographic ranges, and natural history of trees, herbaceous plants, plant associations, and habitat typing. Explore the historical and current importance of key trees and herbaceous plants to society. Within the context of plant associations and indicator species, course content will focus on major forest, rangeland, and urban ecosystems and will highlight exotic tree and herbaceous plant species of North America.

Prerequisite: BZ 120.

Registration Information: Must register for lecture and laboratory. Credit allowed for only one of the following: F 312, F 313, or RS 313. Credit allowed for only one of the following: F 313, RS 312, or RS 313.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: Yes.

F 321 Forest and Natural Resource Biometry Credits: 3 (2-2-0)

Course Description: Measure and calculate the structure of different ecosystems. Sampling and statistical techniques to quantify ecosystem structure. Methods to model ecosystem structure to predict potential future conditions.

Prerequisite: (MATH 117 to 160 - at least 3 credits and NR 220) and (STAT 201 or STAT 301).

Registration Information: Must register for lecture and laboratory. Required field trips.

Term Offered: Fall.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: Yes.

F 322 Economics of the Forest Environment Credits: 3 (3-0-0)

Course Description: Economic principles and techniques applied to forested environments.

Prerequisite: AREC 202 or ECON 202 or ECON 240 or AREC 240.

Terms Offered: Fall, Spring.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 324 Fire Effects and Adaptations Credits: 3 (3-0-0)

Course Description: Introduction to fire ecology including fire history, ecosystem effects, and organism responses.

Prerequisite: F 209 or LAND 220 or LIFE 220 or LIFE 320.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 325 Silviculture Credits: 3 (3-0-0)

Course Description: Principles of silviculture and the application to ecologically-based management and restoration of forests ecosystems.

Prerequisite: NR 220.

Term Offered: Spring.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 326 Wildland Fire Behavior and Management Credits: 3 (3-0-0)

Course Description: Physical and managerial principles influencing fire, how fires shape our forests and approaches used to manage wildland fire.

Prerequisite: F 209 or LAND 220 or LIFE 220 or LIFE 320.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 330 Forest Planning and Wood Harvesting Systems Credits: 2 (2-0-0)

Course Description: Principles and components of forest planning and wood harvesting systems to understand and synthesize impacts on ecosystems components and services; market and non-market valuations; and social and cultural experiences.

Prerequisite: F 321.

Restriction: Must not be a: Freshman.

Registration Information: Sophomore standing. Required field trips. Credit not allowed for both F 330 and F 380A1.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 331 Wood Products in Society Credits: 3 (2-2-0)

Course Description: Role of wood products in society; spectrum of wood products; some field trips.

Prerequisite: None.

Registration Information: Must register for lecture and laboratory. Required field trips.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 335 Applications of Silviculture Credit: 1 (0-3-0)

Course Description: Laboratory and some field experience in utilization of ecologically-based silvicultural practices for sustainable timber production, maintenance or restoration of biological diversity, and protection of aesthetic quality and site productivity.

Prerequisite: F 325, may be taken concurrently.

Registration Information: Enrollment in Forest and Rangeland Stewardship major. Required field trips.

Term Offered: Spring.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 421 Ecological Forest Management Credits: 3 (3-0-0)

Course Description: Preparation of forest management plans to achieve integrated environmental and economic goals based upon principles of forest ecology; evaluation of alternative prescriptions; adaptive management and monitoring.

Prerequisite: F 311 and F 321 and F 325 and F 335.

Term Offered: Fall.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: Yes.

F 422 Quantitative Methods in Forest Management Credits: 3 (2-2-0)

Course Description: Design and analysis of optimization and nonoptimization models in forest managerial operations.

Prerequisite: F 321 and F 322.

Registration Information: Must register for lecture and laboratory.

Term Offered: Fall.

Grade Modes: S/U within Student Option, Trad within Student Option.

Special Course Fee: No.

F 425 Advanced Wildland Fire Behavior and Management Credits: 3 (3-0-0)

Course Description: Advanced strategies, tools, and techniques for wildland fire management: prediction, prevention, suppression, and use for resource benefit.

Prerequisite: F 326 and NR 319.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 430 Forestry Field Practices Credits: 3 (1-4-0)

Course Description: Forestry field course, S212 saw certification, collect stand inventory data, develop and implant stand prescription, and harvest and process trees.

Prerequisite: F 330 and F 421.

Registration Information: Must register for lecture and laboratory. Required field trips.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 466 Urban and Community Forestry Credits: 3 (3-0-0)

Also Offered As: HORT 466.

Course Description: Policies and management of publicly and privately owned community forests in urbanized areas.

Prerequisite: F 310 or RS 310 or HORT 221.

Registration Information: Credit not allowed for both F 466 and HORT 466.

Term Offered: Fall (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

F 487 Professional Forestry Internship Credits: Var[3-12] (0-0-0)

Course Description: Professional-level field experience with forestry organization.

Prerequisite: None.

Registration Information: Written consent of department chair.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

F 495 Independent Study Credits: Var[1-18] (0-0-0)**Course Description:****Prerequisite:** None.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**F 498 Research Credits: Var[1-6] (0-0-0)****Course Description:** Mentored research in forestry, rangeland ecology, restoration ecology, or related fields.**Prerequisite:** None.**Registration Information:** Written consent of instructor.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 510 Ecophysiology of Trees Credits: 3 (2-3-0)****Course Description:** Environmental factors affecting physiology of woody plants; emphasis on water relations in trees and importance of water in physiological processes.**Prerequisite:** BZ 440.**Registration Information:** Must register for lecture and laboratory.**Term Offered:** Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 520 Advanced Quantitative Methods in Forestry I Credits: 3 (3-0-0)****Course Description:** Design and analysis of optimization models in forest management operations: linear, goal, and dynamic programming.**Prerequisite:** F 322 and MATH 160.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 521 Advanced Quantitative Methods in Forestry II Credits: 3 (2-2-0)****Course Description:** Analysis of forest inventory information; dynamic and stochastic models oriented to decision making and research in forestry.**Prerequisite:** F 520.**Registration Information:** Must register for lecture and laboratory.**Term Offered:** Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 522 Advanced Forest Economics Credits: 3 (3-0-0)****Course Description:** Analysis of forestry issues: financial maturity, management intensity, federal policy, taxation, natural environments, and silviculture.**Prerequisite:** ECON 306.**Term Offered:** Spring.**Grade Modes:** S/U within Student Option, Trad within Student Option.**Special Course Fee:** No.**F 524 Forest Fire Meteorology and Behavior Credits: 3 (2-2-0)****Course Description:** Effects of atmospheric processes on wild and prescribed fires; interrelationships of weather, fuels, and topography on forest and range fires.**Prerequisite:** None.**Registration Information:** Must register for lecture and laboratory.**Term Offered:** Fall (odd years).**Grade Mode:** Traditional.**Special Course Fee:** No.**F 525 Silvicultural Practices Credits: 4 (3-0-1)****Course Description:** Comprehensive coverage of silvicultural practices as applied in US forestry.**Prerequisite:** F 311.**Registration Information:** Must register for lecture and recitation. Credit not allowed for both F 525 and F 526.**Term Offered:** Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 526 Multiple Resources Silviculture Credits: 3 (3-0-0)****Course Description:** Concepts and techniques of silviculture and their application to forest ecology to meet a wide range of desired conditions and resource objectives. Develops knowledge of ecological applications directed at the management of forests with multiple considerations, including wildlife, recreation, forest health, and timber production.**Prerequisite:** F 311 or LIFE 320 or NR 565 or NR 578.**Registration Information:** Offered as an online course only. Credit allowed for only one of the following: F 525, F 526, or F 581A3.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 540 Fuels, Vegetation, and Fire Management Credits: 3 (2-3-0)****Course Description:** Develop, test and display the impact of alternative fuels and vegetation treatments on vegetation development, fuels and fire behavior.**Prerequisite:** None.**Registration Information:** Admission to the Continuing Education in Fuels Management program through the Office of Conference Services.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 571 Applied Forest Ecology Credits: 2 (2-0-0)****Course Description:** Concepts and theory of stand dynamics in relation to advanced ecological concepts within the Rocky Mountain Region and Intermountain West and applications of these concepts to natural disturbance-based management.**Prerequisite:** F 311.**Restriction:** Must be a: Graduate.**Registration Information:** Bachelor's degree required. Offered as an online course only.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**F 572 Advanced Silviculture Practices Credits: 3 (3-0-0)****Course Description:** Application of forest ecology principles and silvicultural techniques to meet a wide range of desired conditions and resource objectives.**Prerequisite:** F 571.**Restriction:** Must be a: Graduate.**Registration Information:** Bachelor's degree required. Offered as an online course only.**Term Offered:** Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.

F 574 Climate Adaptive Forest Management Credit: 1 (1-0-0)

Course Description: Application of climate science and adaptive silviculture strategies to real-world forest management scenarios.

Prerequisite: F 325.

Restriction: Must be a: Graduate.

Registration Information: Bachelor's degree required. This is a partial semester course. Offered as an online course only.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 575 Monitoring for Advanced Silviculture Credits: 2 (2-0-0)

Course Description: Best practices and principles for evaluating forest management effectiveness at various scales across the landscape.

Prerequisite: F 421.

Restriction: Must be a: Graduate.

Registration Information: Bachelor's degree required. Offered as an online course only.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

F 576 Advanced Silviculture Capstone Credits: 3 (3-0-0)

Course Description: Application of ecological principles, climate change science, and regional silvicultural principles to the management of a local forest stand.

Prerequisite: F 572 and F 575.

Restriction: Must be a: Graduate.

Registration Information: Bachelor's degree required. Offered as an online course only.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 592 Advanced Silviculture Seminar Credit: 1 (0-0-1)

Course Description: Forestry professionals and faculty present different aspects of advanced silviculture skills to prepare students for the rigor of online, graduate-level courses and to create a plan and portfolio for their final project at the culmination of the certificate.

Prerequisite: None.

Restriction: Must be a: Graduate.

Registration Information: Bachelor's degree required. This is a partial semester course. Offered as an online course only.

Term Offered: Fall (odd years).

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

F 593 Seminar-Fire Science Credit: 1 (0-0-1)

Course Description:

Prerequisite: None.

Term Offered: Fall.

Grade Mode: Instructor Option.

Special Course Fee: No.

F 610 Advanced Forest Ecology Credits: 3 (1-0-2)

Course Description: Patterns of tree mortality and their consequences for ecological communities, disturbance regimes, and ecosystem processes. The literature included is diverse ranging from ecophysiology to dendroecology to climate science, and the goal is to integrate this diverse literature to understand the ecological consequences of climate variability on forest ecosystems of the southern Rocky Mountains and globally.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Registration Information: At least one undergraduate or graduate course in ecology. Must register for lecture and recitation. Required field trips. Credit not allowed for both F 610 and F 680A1.

Term Offered: Spring (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

F 624 Fire Ecology Credits: 3 (3-0-0)

Course Description: Fire in forest and range ecosystems; principles and techniques for evaluating fire effects on vegetation, soils, watersheds, and wildlife.

Prerequisite: ECOL 505 or F 310 or F 311 or LIFE 320 or NR 565 or NR 578 or RS 300 or RS 310 or RS 452.

Restriction: Must be a: Graduate, Professional.

Registration Information: Sections may be offered: Online.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: No.

F 625 Ecology of Forest Production Credits: 3 (3-0-0)

Also Offered As: ESS 625.

Course Description: Develops student expertise in understanding carbon and nutrient flows in forests.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Registration Information: Must have completed one 300-level course in ECOL. Credit not allowed for both F 625 and ESS 625. Sections may be offered: Online.

Term Offered: Spring (even years).

Grade Mode: Traditional.

Special Course Fee: No.

F 693 Seminar Credit: 1 (0-0-1)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring.

Grade Mode: Instructor Option.

Special Course Fee: No.

F 695 Independent Study Credits: Var[1-18] (0-0-0)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

F 698 Research Credits: Var[1-18] (0-0-0)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.

F 699 Thesis Credits: Var[1-18] (0-0-0)**Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**F 721 Forest Policy Credits: 3 (3-0-0)****Course Description:** Policies and institutions affecting management of forest lands in U.S.**Prerequisite:** NR 567.**Restriction:** Must be a: Graduate, Professional.**Registration Information:** Sections may be offered: Online.**Term Offered:** Spring (even years).**Grade Mode:** Traditional.**Special Course Fee:** No.**F 798 Research Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**F 799 Dissertation Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.