

# RANGELAND ECOSYSTEM SCIENCE-RS (RS)

## Courses

### RS 300 Rangeland Conservation and Stewardship Credits: 3 (3-0-0)

**Course Description:** Conservation and management of rangeland-ecosystem values using sustainable practices.

**Prerequisite:** (BZ 120 or LIFE 102 or LIFE 103) and (F 209 or LAND 220 or LIFE 220 or LIFE 320).

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

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

**Also Offered As:** F 310.

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

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

**Registration Information:** Must have concurrent registration in RS 312. Must register for lecture and laboratory. Credit not allowed for both RS 310 and F 310.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 312 Rangeland Plant Identification Lab Credit: 1 (0-2-0)

**Course Description:** Identification of characteristic grasses, forbs, and shrubs common to North American rangelands.

**Prerequisite:** None.

**Registration Information:** Must have concurrent registration in RS 310.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

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

**Also Offered As:** F 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.

### RS 329 Rangeland Assessment Credit: 1 (0-3-0)

**Course Description:** Five-day intensive field-based course on principles of rangeland ecosystem assessment.

**Prerequisite:** (F 310 or RS 310) and (RS 300 and SOCR 240).

**Term Offered:** Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### RS 331 Wildland Plants and Plant Communities Credits: 3 (2-2-0)

**Course Description:** Distribution of non-forested wildland plant communities and important plant species in the western United States.

**Prerequisite:** BZ 223 or NR 220.

**Registration Information:** Must register for lecture and laboratory. Required field trips. Sections may be offered: Online.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 351 Wildland Ecosystems in a Changing World Credits: 3 (2-2-0)

**Course Description:** Understanding and conserving non-forested wildland ecosystems, processes, and services under changing environmental conditions.

**Prerequisite:** (LIFE 320 or LAND 220 or LIFE 220) and (SOCR 240).

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

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 378 Disturbance Ecology Credits: 2 (2-0-0)

**Course Description:** Foundational knowledge of ecological disturbances, the role of disturbance in biotic communities and ecosystems, and how various communities and ecosystems recover from disturbances.

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

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 400 Rangeland Improvements Credits: 2 (2-0-0)

**Course Description:** Improvement of rangelands through biological and cultural methods; management of improved rangelands.

**Prerequisite:** RS 300 or SOCR 320.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 420 Grass Taxonomy Credits: 3 (1-4-0)

**Course Description:** Anatomy, morphology, and identification of grasses.

**Prerequisite:** BZ 223.

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### RS 432 Rangeland Measurements and Monitoring Credits: 2 (1-3-0)

**Course Description:** Vegetation sampling and field measurements emphasizing applications for monitoring and adaptive management.

**Prerequisite:** (NR 220 and RS 300, may be taken concurrently) and (STAT 201 or STAT 301 or STAT 307).

**Registration Information:** Credit not allowed for both RS 432 and RS 532.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**RS 452 Rangeland Herbivore Ecology and Management Credits: 3 (3-0-0)**

**Course Description:** Ecology and management of large ungulate herbivores including consumer functions at organismal and ecosystem levels.

**Prerequisite:** (F 209 or LAND 220 or LIFE 220 or LIFE 320) and (RS 300).

**Registration Information:** Voluntary field trips. Sections may be offered: Online.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 470 Rangeland Economics and Analysis Credits: 2 (2-0-0)**

**Course Description:** Economics of rangeland resource use; analytical techniques for allocation of rangeland resources.

**Prerequisite:** (AREC 202 or ECON 202) and (RS 300).

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 471 Rangeland Planning and Grazing Management Credits: 2 (2-0-0)**

**Course Description:** Definition of grazing management, grazing systems. Synthesis of animal, plant responses to grazing management. Structure, function of rangeland planning.

**Prerequisite:** RS 300 or SOCR 320.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 472 Rangeland Ecosystem Planning Credits: 4 (1-6-0)**

**Course Description:** Range allotment, ranch, and restoration planning.

**Prerequisite:** RS 471.

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

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 478 Ecological Restoration Credits: 3 (3-0-0)**

**Course Description:** Analysis of environmental factors influencing restoration of disturbed lands and practices for successful restoration of disturbed ecosystems.

**Prerequisite:** (BZ 450 or F 209 or LAND 220 or LIFE 220 or LIFE 320) and (SOCR 240).

**Registration Information:** Credit not allowed for both RS 478 and NR 678.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 495 Independent Study-Rangeland Ecosystems Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**RS 496 Group Study-Rangeland Ecosystem Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**RS 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.

**RS 500 Advanced Rangeland Management Credits: 3 (3-0-0)**

**Course Description:** Rangeland management concepts.

**Prerequisite:** LAND 220 or LIFE 320 or NR 220 or LIFE 220.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 531 World Grassland Ecogeography Credits: 3 (2-3-0)**

**Course Description:** Distribution, climate, and structure of the world's major grasslands with emphasis on North America.

**Prerequisite:** BZ 223.

**Registration Information:** Must register for lecture and laboratory. Required field trips. Sections may be offered: Online.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 532 Rangeland Ecosystem Sampling Credits: 3 (1-3-1)**

**Course Description:** Measurement, analysis techniques for rangeland vegetation. Applications to management emphasized.

**Prerequisite:** (STAT 301) and (LAND 220 or LIFE 320 or NR 220 or LIFE 220).

**Registration Information:** Must register for lecture, lab, and recitation. Required field trips. Credit not allowed for both RS 532 and RS 432.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**RS 552 Range Animal Production and Management Credits: 4 (3-0-1)**

**Course Description:** Biological and ecological basis for production of meat from rangelands.

**Prerequisite:** LAND 220 or LIFE 320 or NR 220 or LIFE 220.

**Registration Information:** Must register for lecture and recitation. Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 565 Riparian Ecology and Management Credits: 3 (2-2-0)**

**Course Description:** Analysis of interactions among biotic and abiotic processes as relates to the ecology and management of riparian systems, emphasizing case studies.

**Prerequisite:** LAND 220 or LIFE 220 or LIFE 320.

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

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 630 Ecology of Grasslands and Shrublands Credits: 3 (3-0-0)**

**Course Description:** Distributions and climatic controls on grassland and shrubland plant communities.

**Prerequisite:** NR 565 or NR 578.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Sections may be offered: Online.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RS 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.

**RS 695 Independent Study-Rangeland Ecosystem 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.

**RS 696 Group Study-Rangeland Ecosystem 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.

**RS 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.

**RS 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.

**RS 793 Seminar Credit: 1 (0-0-1)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**RS 795 Independent Study-Rangeland Ecosystem 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.

**RS 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.

**RS 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.