

Rangeland Ecology and Management

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Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

REM 102 Opportunities in Rangeland Ecology and Management (1 cr)

Basic principles, contemporary issues, and professional opportunities in rangeland management. Introduction to careers with ranches, land management agencies, consulting firms, and environmental organizations.

REM 200 (s) Seminar (cr arr)

REM 203 (s) Workshop (cr arr)

REM 204 (s) Special Topics (cr arr)

REM 221 Ecology (3 cr)

Fundamental principles of ecology. Major topics covered by the course include the physical environment, how organisms interact with each other and their environment, evolutionary processes, population dynamics, communities, energy flow and ecosystems, human influences on ecosystems, and the integration and scaling of ecological processes through systems ecology. Computer-based materials are used extensively for guided independent learning in this course. An online version of this course is offered as a separate section. Course information: EcologyOnline.net. Recommended Preparation: Introductory botany, zoology and good working knowledge of Windows-based computer systems.

Prereq: Biol 102, 115, or 116; or Permission

REM 244 Wildland Fire Management (2 cr)

Introduction to wildland fire management including fire behavior, fuels, fire prevention and suppression, fire policy and fire ecology. Includes discussion of current fire management issues.

REM 251 Rangeland Principles (2 cr)

Rangelands are vast landscapes that cover most of western North America and the earth. Students will examine the ecological principles that cause these grasslands, shrublands, woodlands and deserts to change or stay the same. How humans use and manage these ecosystems will also be explored. The modern challenges of rangeland management must be met with broad thinking and new, sustainable practices to maintain and restore rangelands and the human communities that rely on them.

REM 299 (s) Directed Study (cr arr)

REM 341 Systematic Botany (3 cr)

Classification and identification of vascular plants. Emphasis on Pacific Northwest flora. (Spring only)

Prereq: Biol 115 and 116; or Plsc 205

REM 351 Wildland Plant Identification Field Studies (3 cr)

Develop skills to identify, classify, and collect rangeland plants in the field. Focus on identification of grasses, forbs, and shrubs. Discussions will also encompass the ecological roles of wildland plants and the ecosystem classification. This course includes a 7- to 9-day field trip. Required for REM majors. (Spring only)

REM 353 Rangeland Plant Identification and Ecology (3 cr)

Classification, description, and identification of the most important rangeland and riparian plants in North America; particular reference to important ecological roles of these plants. Recommended Preparation: For 221 or REM 221. (Fall only).

REM 357 Rangeland and Riparian Habitat Assessment (3 cr)

Methods for inventory and monitoring of upland and riparian rangeland communities; basic sampling techniques used for measuring vegetation attributes and assessing production and utilization of vegetation for management purposes; evaluation of plant communities will be interpreted with respect to ecological health, watershed protection, and value as livestock and wildlife habitat. Two lec and one field trip/lab a wk. Recommended Preparation: basic statistics course. (Fall only).

REM 360 Rangeland Entomology (2 cr)

Much of the world's population depends upon the resources available from rangeland habitats. Rangeland resources are not only an economic asset, but they also serve a multitude of ecological functions. Students will be introduced to the complex community of insects that inhabit rangeland ecosystems and will be better able to understand the roles played by insects in rangeland systems and the impact that selected management practices may have on their ability to fulfill those roles. Recommended Preparation: Stat 251 and REM 221. (Fall only)

REM 398 (s) Renewable Natural Resources Internship (cr arr)

Supervised field experience with an appropriate public or private agency. Req'd for cooperative education students. Graded P/F.

Prereq: Permission of department

REM 400 (s) Seminar (cr arr)**REM 402 Applied Spatial Analysis in Natural Resources (2 cr)**

Course reviews basic GIS concepts emphasizing hands-on experience and independent problem solving. The overarching goal is to guide students towards excellence in assessing and analyzing management issues in natural resources with GIS and other spatial analysis techniques. (Fall only)

Prereq: For 375 or Geog 385; or Permission

REM 403 (s) Workshop (cr arr)**REM 404 (s) Special Topics (cr arr)****REM 407 GIS Application in Fire Ecology and Management (1 cr)**

Introduces applications of GIS in fire ecology, research, and management including incident mapping, fire progression mapping, GIS overlay analysis, remote sensing fire severity assessments, fire atlas analysis and the role of GIS in the Fire Regime Condition Class concept and the National Fire Plan. (Spring only)

Prereq: NR 402 or GIS Primer

REM 410 Principles of Vegetation Measurement and Assessment (1 cr)

On-line course designed to give an overview of vegetation measurement techniques for grasslands, shrublands, woodlands, and forests. Students will gain a solid understanding of how to assess and monitor vegetation attributes relative to wildlife habitat, livestock forage, fire fuel characteristics, watershed function, and many other wildland values. Recommended Preparation: A basic statistics course and understanding of how to use computer spreadsheets such as Excel. (Fall only)

REM 429 Landscape Ecology (3 cr)

See For 429.

REM 440 Wildland Restoration Ecology (3 cr)

Ecological principles and management practices involved in restoring and rehabilitating wildland ecosystems after disturbance or alteration to return damaged ecosystems to a productive and stable state. Recommended Preparation: a course in general ecology. (Spring only).

REM 450 Global Environmental Change (3 cr)

See Geog 450.

REM 452 Western Wildland Landscapes (1 cr)

Survey of wildland plant communities of western North America, focusing on their natural history, including the effects of use by human beings, based on their physical, climatic, and biological characteristics. Recommended Preparation: REM 221 or For 221. (Spring only)

Prereq: Geog 310

REM 454 Invasive Plant Management (3 cr)

Ecological principles and management options for invasive plant control on rangelands; focus on landscape-level management approaches including detection, monitoring, and prevention of weed invasions, restoration of weed-infested rangeland and coordinated weed management planning. One 2-day field trip. Recommended Preparation: PISc 338. (Spring, Alt/odd yrs)

REM 456 Integrated Rangeland Management (3 cr)

Management strategies for integrating grazing with other natural resource values such as wildlife, water, timber, recreation, and aesthetics; emphasis on herbivore ecology including ecological impacts of grazing, ways to manage grazing, and nutritional relationships between plants and free-ranging ungulates on rangeland, pastureland, and forest ecosystems. One 1-week field trip. Recommended Preparation: REM 251. (Spring only)

REM 459 Rangeland Ecology (2 cr)

Application of ecological principles in rangeland management; stressing response and behavior of range ecosystems to various kinds and intensity of disturbance and management practice. Web only [www.uidaho.edu/range459/]. Recommended Preparation: a course in general ecology or Permission (Fall only).

REM 460 Rangeland Ecology Current Topics and Field Studies (1 cr)

Discussion of topics related to changing knowledge and technology relevant to ecology of grasslands, shrublands and woodlands. Min. five discussion classes; one five-day field trip. Required for REM majors. (Fall only)

Coreq: REM 459

REM 472 Remote Sensing of the Environment (3-4 cr)

See For 472.

REM 483 Senior Project Presentation (1 cr)

See For 483.

REM 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)

See WLF 485.

REM 497 Senior Research and Thesis (cr arr)

A research investigation, selected and designed jointly by the student and professor, during which the student has the opportunity to learn research techniques of experimental design, proposal writing, data collection and analysis, scientific writing, and publication; at completion, the student will produce a publishable journal manuscript and/or a conference presentation.

Prereq: Senior standing and Permission

REM 498 (s) Internship (cr arr)

REM 499 (s) Directed Study (cr arr)

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

Prereq: Senior standing, GPA 2.5, and Permission

REM 500 Master's Research and Thesis (cr arr)

REM 501 (s) Seminar (cr arr)

Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics.

Prereq: Permission

REM 502 (s) Directed Study (cr arr)

REM 503 (s) Workshop (cr arr)

Selected topics in the conservation and management of natural resources.

Prereq: Permission

REM 504 (s) Special Topics (cr arr)

REM 507 Landscape and Habitat Dynamics (3 cr)

Students explore landscape change occurring a variety of spatial and temporal scales, including global change, succession, disturbance events, and change induced by humans. Via scientific readings, models and spatial analysis students will learn how to quantify landscape change and how a change in environmental conditions and disturbance regimes may affect the composition of landscapes, specifically plant and animal habitats. Recommended Preparation: courses in ecology, statistics, and GIS. (Spring, alt/yrs)

Prereq: Permission

REM 527 Landscape Ecology of Forests and Rangelands (2-3 cr)

Ecological relationships of biotic communities in heterogeneous environments, spatial and temporal patterns, importance of landscapes in maintenance of ecosystem diversity and function. One 2-hr lecture/discussion a week based on extensive reading of current literature and case studies. In addition, those students taking 3 credits will meet an additional hour a week, focusing on quantitative landscape analysis, and they will participate in a 2-day field trip. (Spring only)

Prereq: Upper-division plant or animal ecology

REM 530 Stream Ecology (3 cr)

See Fish 530.

REM ID551 Rangeland Vegetation Ecology (3 cr) WSU NATRS 551

Ecological concepts of the nature, dynamics, and distribution of plant communities; secondary successional processes, soil-vegetation relations, and development of vegetation-classification schemes for better land management. (Spring, Alt/odd yrs)

Prereq: Plant ecology and Permission

REM ID560 Plant Ecophysiology (3 cr) WSU NATRS 524

Functional responses and adaptations of individual plant species to their environment, emphasizing morphological and physiological mechanisms that influence plant establishment, the physical environment, below- and above-ground productivity, and plant interactions such as competition, herbivory, and allelopathy. (Fall only)

Prereq: A course in general ecology (i.e. REM 221) and general botany, or Permission [www.EcologyOnline.net]

REM 597 (s) Practicum (cr arr)

REM 598 (s) Internship (cr arr)

REM 599 (s) Non-thesis Master's Research (cr arr)

Research not directly related to a thesis or dissertation.

Prereq: Permission

REM 600 Doctoral Research and Dissertation (cr arr)

Prereq: Admission to the doctoral program in "natural resources" and Permission of department