Major in Rangeland Ecology

The major in Rangeland Ecology emphasizes interdisciplinary study, research, and management of the world's rangelands. Rangelands occupy nearly 50 percent of the earth's land surface and consist of natural grasslands, savannas, shrublands, riparian areas, deserts, tundra, and coastal marshes. Colorado is an ideal setting for the study of rangeland ecology and management with shortgrass steppe to the east and high elevation grasslands, woodlands, and riparian areas to the west.

Students are prepared to understand and manage the animal, soil, and vegetation resources on rangelands for state and federal land management agencies as well as a variety of private companies and non-governmental agencies. The curricula are accredited by the Society for Range Management and meet U.S. Civil Service requirements for range conservationist and soil conservationist. With a few additional courses, graduates can meet U.S. Civil Service requirements for soil scientist and ecologist. Students develop an in-depth understanding of basic plant and animal biology; a basic understanding of the physical sciences as they relate to rangeland ecology; knowledge of important concepts of ecology and range management; an understanding of economics related to recognizing alternatives; and analytical and decision making skills. Students also develop communication, political and interpersonal skills to make their education effective.

Three concentrations are offered: Conservation and Management, Range and Forest Management, and Restoration Ecology.

Learning Outcomes

Students will:

• Accurately and effectively communicate their understanding of rangeland ecology both verbally and in written form
• Demonstrate learning of subject areas outside their major study focus, including (but not restricted to) principles/issues in wildlife, water, recreation, wilderness, soil, range, and fishery resources; students will also demonstrate knowledge of social science analytic techniques
• Demonstrate comprehensive knowledge of subject areas relevant to the major fields of study in range ecology and management, including plant/animal interactions, grazing methods, range improvements, animal nutrition, plant ecology, and soil science, and apply this knowledge in a complex, problem-solving environment

Potential Occupations

Examples of career opportunities include, but are not limited to: restoration ecologist, rangeland scientist, range management specialist, soil conservationist, soil scientist, rangeland conservationist, plant ecologist, riparian ecologist, ranch management, researcher, commercial sales and service representative, consultants, mine rehabilitation specialist, real estate/land manager, international rangeland specialist.

Participation in internships, volunteer activities, or cooperative education opportunities is highly recommended to enhance practical training and development. Graduates who go on for advanced studies can attain more responsible positions with the possibility of rising to top professional levels.

Concentrations

• Conservation and Management Concentration
• Range and Forest Management Concentration
• Restoration Ecology Concentration