Range Science, MS, PhD

Department: Wildland Resources Department
College: S.J. & Jessie E. Quinney College of Natural Resources

Overview

About This Degree

Utah State University is the only public university in the state that offers advanced degrees in range science, and it is the only university in the state with a college of natural resources. As a land-grant institution, USU is committed to educating students and preparing them for work in conservation and preservation of range lands. Students in this program study the science and application of ecology principles in rangeland environments. While the focus of range sciences at USU is primarily on the rangelands of the Great Basin, students will receive a broad background in various subjects in rangeland ecosystems. Students can study specific areas related to rangeland science, such as vegetation management, animal behavior, and restoration of rangelands.

Career Options

At the PhD level, graduates primarily pursue the following career paths:

- Researchers for government agencies
- University faculty and academia
- Environmental consultants

Students who graduate with master's degrees have a wide variety of options, such as:

- Work for government agencies
- Conservationists
- Range management specialists
- Non-government organizations

Graduates can also apply their knowledge of range science to other areas, such as real estate and business.

What it takes

Admissions Requirements

Students with undergraduate degrees in natural resources or sciences are preferred.

To be accepted to the program, it is recommended that applicants first contact a specific faculty member with whom they are interested in working. If the faculty member is accepting graduate students and agrees to work with the student, the student can then apply by completing the following application requirements:

Application Requirements:

- Complete the online application
- Pay the $55 application fee
- Score at or above the 40th percentile on the GRE
- Have a 3.0 or higher GPA on your last 60 semester or 90 quarter credits
- Provide transcripts of all college/university credits
- Provide three contacts for letters of recommendation

International students have additional admissions requirements.

Admissions Deadlines

Applications for graduate programs are accepted year-round. However, chances for acceptance are best if students apply between October and January. It is also encouraged that students begin in the fall if possible.

Master's Degree Plan Options

Students can receive the MS by pursuing one of two options:

- In the **Plan A** option, students complete graduate-level coursework and must write a thesis.
- The **Plan B** option requires the production of a paper or creative work of art and is expected to reflect equivalent scholarship standards as a thesis.

Financial Assistance

The Department of Wildland Resources provides funding for most of its graduate students through research assistantships, available through professors having contracts, grants, or other awards.

A variety of additional funding opportunities are available, including fellowships, scholarships, tuition awards, and travel support. Additionally, students may be eligible for subsidized health insurance through qualifying assistantships.

Program Requirements

Click here to see course requirements for the **Master of Science**.

Click here to see course requirements for the **Doctor of Philosophy**.

PhD Qualifying Exams:

PhD students must pass comprehensive examinations. This exam is used to assess whether a student is prepared to successfully conduct independent research. The assessment depends upon the student's knowledge in his or her area of study and in supporting areas, understanding of philosophical perspectives on scholarship, and ability to communicate this knowledge effectively.

It is recommended that the comprehensive exam be taken by the end of the student's second academic year, and it must be passed no later than one year prior to defending the dissertation and before candidacy will be recommended.

Contact

Advisor(s)

Marsha Bailey
Wildland Resources Staff Assistant
Office: NR 206
Phone: (435) 797-2503
Email: marsha.bailey@usu.edu

Faculty

Peter Adler, PhD, Colorado State University
Associate Professor
Area: Plant community ecology
Office: BNR 287
Phone: (435) 797-1021
Email: peter.adler@usu.edu

Lise Aubry, PhD, University Paul Sabatier
Research Assistant Professor
Area: Population ecologist
Office: NR 356
Phone: 435-797-3219
Email: lise.aubry@aggiemail.usu.edu

Karen Beard, PhD, Yale University
Associate Professor
Area: Community ecology, ecosystem ecology, conservation biology
Office: BNR 161
Phone: (435) 797-8220
Email: karen.beard@usu.edu

Mary Conner, PhD, Colorado State University
Research Associate Professor
Area: Population ecologist
Office: BNR 283
Phone: (970) 217-3404
Email: mary.conner@usu.edu

Michael Conover, PhD, Washington State University
Professor
Area: Animal behavior, wildlife damage management
Office: BNR 159
Phone: (435) 797-2436
Email: mike.conover@usu.edu

Patricia Cramer, PhD, University of Florida – Gainesville
Research Assistant Professor
Area: Transportation ecology, wildlife connectivity, carnivore and ungulate movement
Office: BNR 373
Phone: (435) 797-1289
Email: patricia.cramer@usu.edu

Johan du Toit, PhD, University of Witwatersrand
Professor
Area: Ecology and conservation of large mammals in terrestrial ecosystems
Office: NR 206
Phone: (435) 797-2837
Email: johan.dutoit@usu.edu

Thomas Edwards, PhD, University of Florida
Professor
Area: Spatial ecology, habitat modeling, biostatics
Office: NR 126
Phone: (435) 797-2529
Email: t.edwards@nr.usu.edu

Richard Etchberger, PhD, University of Arizona
Associate Professor
Area: Wildlife-habitat interactions, natural resource education
Office: USU Uintah Basin campus
Phone: (435) 722-1781
Email: rich.etchberger@usu.edu

Shandra Nicole Frey, PhD, Utah State University
Research Assistant Professor
Area: Resolution of human-wildlife conflict
Office: SUU campus
Phone: (435) 586-1924
Email: nicki.frey@usu.edu

Eric Gese, PhD, University of Wisconsin – Madison
Associate Professor
Area: Predator behavior and ecology
Office: NR 128
Phone: (435) 797-2542
Email: eric.gese@usu.edu

Michael Jenkins, PhD, Utah State University
Associate Professor
Area: Disturbance ecology and management, insects, fire, snow avalanches
Office: NR 236
Phone: (435) 797-2531
Email: mike.jenkins@usu.edu

Michael King, PhD, Utah State University
Associate Professor
Area: Wildlife management
Office: USU-CEU campus
Phone: (435) 613-5400
Email: mike.king@ceu.edu

David Koons, PhD, Auburn University
Assistant Professor
Area: Animal population and ecology
Office: NR 242
Phone: (435) 797-8670
Email: david.koons@usu.edu

Michael Kuhns, PhD, Auburn University
Acting Department Head, Professor, Forestry Undergraduate Advisor
Area: Forestry extension specialist, urban forestry, tree physiology
Office: NR 324
Phone: (435) 797-4056
Email: mike.kuhns@usu.edu

Andrew Kulmatiski, PhD, Utah State University
Assistant Professor
Area: Plant-soil interactions
Office: NR 224
Phone: (435) 797-9485
Email: andrew.kulmatiski@usu.edu

James Long, PhD, University of Washington
Professor
Area: Forest ecology, silviculture
Office: NR 326
Phone: (435) 797-2574
Email: james.long@usu.edu

James Lutz, PhD, University of Washington
Assistant Professor
Area: Forest ecology
Office: NR 214
Phone: (435) 797-0478
Email: james.lutz@usu.edu

Dan MacNulty, PhD, University of Minnesota
Assistant Professor
Area: Wildlife ecology
Office: BNR 271
Phone: 435-797-7442
Email: dan.macnulty@usu.edu

Terry Messmer, PhD, North Dakota State University
Professor
Area: Fisheries and wildlife extension, wild ungulate and waterfowl management, wetlands ecology, private land management, conservation communication
Office: BNR 279
Phone: (435) 797-3975
Email: terry.messmer@usu.edu

Karen Mock, PhD, Northern Arizona University
Associate Professor
Area: Conservation genetics and applied molecular ecology
Office: NR 338
Phone: (435) 797-7870
Email: karen.mock@usu.edu

R. Douglas Ramsey, PhD, University of Utah
Professor
Area: Remote sensing, geographic information systems, landscape ecology, spatial analysis
Office: NR 355 A
Phone: (435) 797-3783
Email: doug.ramsey@usu.edu

Eugene Schupp, PhD, University of Iowa
Professor
Area: Plant population ecology, restoration ecology
Office: BNR 373
Phone: (435) 797-2475
Email: eugene.schupp@usu.edu

Eric Thacker, PhD, Utah State University
Assistant Professor
Area: Range extension specialist
Office: NR 144
Phone: (435) 797-3796
Email: eric.thacker@usu.edu

Helga Van Miegroet, PhD, University of Washington – Seattle
Professor
Area: Wildland soils and biochemistry
Office: BNR 157
Phone: (435) 797-3175
Email: helga.vanmiegroet@usu.edu

Kari Veblen, PhD, University of California Davis
Assistant Professor
Area: Rangeland ecologist
Office: NR 332
Phone: 435-797-3970
Email: kari.veblen@usu.edu

Juan Villalba, PhD, Utah State University
Research Assistant Professor
Area: Foraging behavior
Office: BNR 213
Phone: (435) 797-2539
Email: juan.villalba@usu.edu

Julie Young, PhD, Utah State University
Assistant Professor
Area: USDA National Wildlife Research Center, Predator Behavior and Ecology
Office: BNR 165
Phone: (435) 797-1348
Email: julie.young@usu.edu

Get Involved

Professional Organizations, Honor Societies, and Clubs

Society for Range Management: The SRM is the professional scientific society and conservation organization whose members are concerned with studying, conserving, managing, and sustaining the varied resources of the rangelands that comprise nearly half the land in the world. Established in 1948, SRM has more than 4,000 members in 48 countries, including many developing nations.

Labs, Centers, Research

Center for Integrated BioSystems: The CIB leads a progressive, interdisciplinary effort in research, core services, and education serving agriculture and life sciences. The CIB is where the first hybrid animal, a mule, was cloned, and was named one of “30 Awesome College Labs” by Popular Science magazine. The CIB has a research program with several active projects in diverse areas of life science that encompass plant, animal, and microbe functional genomics.

Ecology Center: The Ecology Center is an administrative structure in the university that supports and coordinates ecological research and graduate education in the science of ecology and provides professional information and advice for decision makers considering actions that affect the environment. The Ecology Center at USU has had a string of directors known nationally and worldwide as premier scientists in the field of ecology, and students graduating with a degree in ecology are able to make important contacts with influential faculty that can help them go on to prestigious post-doctoral programs and faculty positions at universities around the world.

S.J. and Jessie E. Quinney Natural Resources Research Library: The Quinney Library maintains collections of materials pertaining to natural resources and the environment in a number of formats that support the programs of study and research in the College of Natural Resources and several partnering centers. The library has more than 60,000 items, both print and electronic, as well as videos, images, and more.

USDA ARS Forage and Range Laboratory: Scientists at the USDA-ARS Forage and Range Research Laboratory develop improved plant materials and planting practices to enhance both environmental conservation and rancher profitability on rangelands and pastures in the western United States.

USDA ARS Poisonous Plant Research Laboratory: The Poisonous Plant Research Laboratory identifies toxic plants, and its interdisciplinary teams of chemists, geneticists, pathologists, physiologists, plant and range scientists, toxicologists and veterinarians provide an interdisciplinary approach of applied and basic research to develop solutions to intoxication.