

RANGELAND RESOURCE SCIENCE

Bachelor of Science degree with a major in Rangeland Resource Science

Bachelor of Science degree with a major in Rangeland Resource Science — concentration in Wildland Soil Science

Minor in Rangeland Resource Science

Minor in Wildland Soil Science

See *Natural Resources* for information on the Master of Science degree.

Department Chair

David F. Greene, Ph.D.

Department of Forestry & Wildland Resources

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The Program

Learn to manage rangeland ecosystems wisely. Study forage, timber, wildlife, recreation, watersheds, and their interrelationships.

Classroom instruction is enhanced by the university's plant and animal nutrition laboratories. Humboldt also has a range herbarium. Nearby privately owned ranches and federal lands offer excellent opportunities for field study.

Potential careers: range conservationist, biological technician, range manager, environmental specialist, agricultural inspector, lands specialist, soil conservationist or soil scientist, range consultant, natural resources specialist, watershed manager, or ecosystem restoration specialist.

This rangeland resource concentration meets the qualifications for "Rangeland Specialist" and "Soil Conservationist" in federal employment.

Preparation

In high school take courses in biology, chemistry, mathematics, and earth sciences.

REQUIREMENTS FOR THE MAJOR

For a description of degree requirements to be fulfilled in addition to those listed below for the major, please see "The Bachelor's Degree" section of the catalog, pp. 61-77, and "The Master's Degree" section of the catalog, pp. 78-80.

Complete all courses in the major with a C- or better.

Lower Division Core Requirements

| | | |
|------------------|-------|--------------------------------------|
| BIOL 105 | (4) | Principles of Biology* |
| BOT 105 | (4) | General Botany* |
| CHEM 107 | (4) | Fundamentals of Chemistry* |
| GSP 101/GSP 101L | (2/1) | Geospatial Concepts and Lab* |
| GSP 216 | (3) | Intro to Remote Sensing, or |
| GSP 270 | (3) | Geographic Information Science (GIS) |
| GEOL 109 | (4) | General Geology* |
| PHYX 106 | (4) | General Physics* |
| RRS 285/SOIL 285 | (1) | Rangeland Resource Seminar |
| SOIL 260 | (3) | Intro to Soil Science |
| STAT 109 | (4) | Introductory Biostatistics* |

Upper Division Core Requirements

| | | |
|----------|-----|------------------------------------|
| BOT 310 | (4) | General Plant Physiology |
| BOT 350 | (4) | Plant Taxonomy |
| EMP 305 | (3) | Environmental Conflict Resolution* |
| FOR 315 | (3) | Forest Management |
| GEOL 306 | (3) | General Geomorphology* |
| RRS 306 | (3) | Wildland Resource Principles* |
| RRS 360 | (3) | Wildland Plant Communities |
| RRS 370 | (3) | Wildland Ecology Principles |
| RRS 375 | (3) | Vegetation Analysis & Health |
| SOIL 360 | (3) | Origin & Classification of Soils |
| SOIL 363 | (3) | Wetland Soils |
| SOIL 460 | (3) | Forest & Range Soils Management |
| WSHD 310 | (4) | Hydrology & Watershed Management |

Students select one of the following concentrations:

Rangeland Resource Science

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|---------|-----|------------------------------------|
| RRS 420 | (3) | Intro to Animal Science |
| RRS 430 | (3) | Wildland Restoration & Development |
| RRS 460 | (2) | Rangeland & Ranch Planning |
| RRS 461 | (1) | Wildland Resources Capstone |

or

Wildland Soil Science Concentration

| | | |
|----------|-----|-----------------------|
| SOIL 461 | (1) | Forest Soils Capstone |
| SOIL 462 | (3) | Soil Fertility |
| SOIL 465 | (3) | Soil Microbiology |
| SOIL 467 | (3) | Soil Physics |

Learn to address the unique management requirements and problems of wildland soils. Wildland soils are uncultivated, natural soils supporting herbaceous and woody plant communities supplying timber, wildlife habitat, livestock forage, watershed values, and other ecosystem services.

Courses in this option cover the basic physical and biological sciences, introductory and advanced soil science, and soil and resource management.

Classroom instruction is enhanced by the university's soil science laboratories and greenhouses. Research and demonstration sites on private and public lands in Northern California enhance field studies.

Potential careers: soil conservationist, soil scientist, soil consultant, environmental specialist, agricultural inspector, lands or natural resources specialist, restoration specialist, or watershed manager.

This program meets the qualifications for "Soil Conservationist" and "Soil Scientist" in federal employment.

*Course also meets general education requirements.

**REQUIREMENTS FOR THE MINOR
IN RANGELAND RESOURCE
SCIENCE**

- EMP 105 (3) Natural Resource Conservation*
- SOIL 260 (3) Intro to Soil Science
- RRS 306 (3) Wildland Resource Principles*
- RRS 360 (3) Wildland Plant Communities
- RRS 370 (3) Wildland Ecology Principles
- RRS 375 (3) Vegetation Analysis & Health

**REQUIREMENTS FOR THE MINOR
IN WILDLAND SOIL SCIENCE**

- SOIL 260 (3) Intro to Soil Science
- SOIL 360 (3) Origin & Classification of Soils
- SOIL 460 (3) Forest & Range Soils Management

At least three courses (including one or more with plus signs +) from the following:

- GEOG 306 (3) General Geomorphology*
- SOIL 363 (3) Wetland Soils
- SOIL 462 (3) Soil Fertility*
- SOIL 465 (3) Soil Microbiology*
- SOIL 467 (3) Soil Physics*
- SOIL 468 (3) Intro to Agroforestry
- WSHD 310 (4) Hydrology & Watershed Management, **or**
- WSHD 424 (3) Watershed Hydrology



*Course also meets general education requirements.
