

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. 66-81., and "The Master's Degree" pp. 82-84.

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

Core Courses

Lower Division

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)
GEOLOGY 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

BOT 310	(4)	General Plant Physiology
BOT 350	(4)	Plant Taxonomy
ESM 305	(3)	Environmental Conflict Resolution
FOR 315	(3)	Forest Management
GEOLOGY 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

Core courses plus:

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

Core courses plus:

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 concentration 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.

REQUIREMENTS FOR THE MINORS

Rangeland Resource Science Minor

ESM 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

Wildland Soil Science Minor

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

