RANGELAND ECOLOGY AND MANAGEMENT (B.S.)

This major prepares students to conserve, restore, and manage the vast landscapes known as rangelands. These ecosystems include deserts, prairies, shrublands, and woodlands. The degree program focuses on the scientific study of rangelands and introduces principles for managing and restoring rangelands for maximum benefit and ecosystem sustainability.

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/)) and:

Code	Title	Hours
First and Second Years		
AVS 109	The Science of Animals that Serve Humanity	3-4
or AVS 110	Science of Animal Husbandry	
BIOL 114	Organisms and Environments	3-4
or BIOL 115	Cells and the Evolution of Life	
BIOL 213	Structure and Function Across the Tree of Life	4
or PLSC 205	General Botany	
COMM 101	Fundamentals of Oral Communication	3
or AGED 101	Verbal Communication in Agriculture, Food, and Natural Resources	
ECON 202	Principles of Microeconomics	3
FOR 221/ WLF 220	Principles of Ecology	3
FOR 235	Society and Natural Resources	3
MATH 143	College Algebra	3-4
or MATH 160	Survey of Calculus	
NR 101	Exploring Natural Resources	2
REM 151	Rangeland Principles	3
SOIL 205	The Soil Ecosystem	3
SOIL 206	The Soil Ecosystem Lab	1
STAT 251	Statistical Methods	3
REM 252	Wildland Plant Identification	2
REM 253	Wildland Plant Identification Field Studies	1
Select one of the following:		4
CHEM 101 & 101L	Introduction to Chemistry and Introduction to Chemistry Laboratory	
CHEM 111 & 111L	General Chemistry I and General Chemistry I Laboratory	
Third and Fourth Years		
ENGL 313	Business Writing	3
or ENGL 317	Technical Writing II	
or ENGL 318	Science Writing	
or WLF 370	Management and Communication of Scientific Data	
FISH 430	Riparian and River Ecology	3
or FOR 462	Watershed Science and Management	
FOR 375	Fundamentals of Geomatics	3
NRS 383	Natural Resource and Ecosystem Service Economics	3
or AGEC 451	Applied Environmental and Natural Resource Economics	
REM 341	Systematic Botany	3
REM 410	Principles of Vegetation Monitoring and Measurement	2
REM 456	Integrated Rangeland Management	3
REM 459	Rangeland Ecology	3
REM 460	Integrated Field Studies in Rangelands	1
SOIL 454	Pedology	3
Select one of the following:		3-4
REM 280 & PLSC 419	Introduction to Wildland Restoration and Plant Community Restoration Methods	
REM 440	Restoration Ecology	
Career Track courses with Advisor Input and Approval (see below)		15
Total Hours		**89-93**

Students must complete 15 credits of advisor-approved electives contributing to a specific career track that may include:

RESTORATION ECOLOGY: Millions of acres of rangeland and forests have been disturbed by fire, invasive plants, and overgrazing. Academic advisors in rangeland conservation have developed a set of electives for students interested in a career in wildland restoration. Completing these career track electives will fulfill requirements for the Restoration Ecology Undergraduate Academic Certificate. Careful selection of courses can also highlight expertise in botany and plant materials to qualify for professions as a botanist.

WILDLIFE HABITAT: Many species of wildlife live on rangelands, and the management of wildlife habitat is an important and sought after skill. With help from their academic advisor, rangeland students can complete a career track that will show expertise in wildlife habitat management and fulfill the requirements for a Minor in Wildlife Resources.

LAND AND LIVESTOCK: This career track is for students interested in hands-on management of rangelands. Academic advisors work with students to select courses that provide the knowledge and skills needed to manage rangelands with grazing and fire to enhance livestock production while sustaining communities of native plants and animals. Completion of these courses can also satisfy the requirements for a Minor in Animal Science or Soil Science.

WILDLAND FIRE: Wildfire is one of the major forces causing change on rangeland ecosystems. Completing a specific set of advisor-approved electives will enable students to show knowledge of land management related to wildland fire and fulfill the requirements for a Minor in Fire Ecology and Management.

INDIVIDUAL INTEREST: Students can work with their advisor to select specific courses to show expertise in a career track of specific interest that may include Watershed or Riparian Ecologist, Natural Resource GIS Specialist, Environmental Consultant, Tribal Land Manager, Resource Economist, or many other interests related to rangelands.

Courses to total 120 credits for this degree

Fall Term 1		Hours
ENGL 101	Writing and Rhetoric I	3
NR 101	Exploring Natural Resources	2
REM 151	Rangeland Principles	3
AVS 109 OR AVS 110		3

MATH 143 OR MATH 160		3
	Hours	**14**
Spring Term 1		
ENGL 102	Writing and Rhetoric II	3
REM 252	Wildland Plant Identification	2
REM 253	Wildland Plant Identification Field Studies	1
(CHEM 101 AND CHEM 101L) OR (CHEM 111 AND CHEM 111L)		4
Elective Course		3
Elective Course		2
	Hours	**15**
Fall Term 2		
COMM 101 or AGED 101	Fundamentals of Oral Communication or Verbal Communication in Agriculture, Food, and Natural Resources	3
ECON 202	Principles of Microeconomics	3
FOR 235	Society and Natural Resources	3
STAT 251	Statistical Methods	3
BIOL 114 OR BIOL 115		4
	Hours	**16**
Spring Term 2		
Humanistic and Artistic Ways of Knowing Course		3
Elective Course		3
Elective Course		1
FOR 221 OR NR 321		3
BIOL 213 OR PLSC 205		4
	Hours	**14**
Fall Term 3		
FOR 375	Fundamentals of Geomatics	3
REM 410	Principles of Vegetation Monitoring and Measurement	2
SOIL 205	The Soil Ecosystem	3
SOIL 206	The Soil Ecosystem Lab	1
Elective Course		3
ENGL 313 OR ENGL 317 OR ENGL 318 OR WLF 370		3
	Hours	**15**
Spring Term 3		
NRS 383 or AGEC 451	Natural Resource and Ecosystem Service Economics or Applied Environmental and Natural Resource Economics	3
REM 341	Systematic Botany	3
Humanistic and Artistic Ways of Knowing Course		3
Career Track, Major Elective Course		3
(PLSC 419 AND REM 280)		3
	Hours	**15**
Fall Term 4		
REM 459	Rangeland Ecology	3
REM 460	Integrated Field Studies in Rangelands	1
SOIL 454	Pedology	3
International Course		3
Career Track, Major Elective Course		3
Career Track, Major Elective Course		3
	Hours	**16**
Spring Term 4		
REM 456	Integrated Rangeland Management	3
American Diversity Course		3
Career Track, Major Elective Course		3
Career Track, Major Elective Course		3
FISH 430 OR FOR 462		3
	Hours	**15**
	Total Hours	**120**

The degree map is a guide for the timely completion of your curricular requirements. Your academic advisor or department may be contacted for assistance in interpreting this map. This map is not reflective of your academic history or transcript and it is not official notification of completion of degree or certificate requirements. Please contact the Registrar's Office regarding your official degree/certificate completion status.

1. Graduates will be able to implement effective planning and problem-solving approaches individually and in teams that consider economic, social, and ecological impacts of rangeland projects and plans.
2. Graduates will be able to use spatial tools (including maps, GPS, GIS, and remote sensing) to observe and interpret ecosystems and aid in making management decisions.
3. Graduates will be proficient with rangeland inventories and perform field measurements of upland and riparian habitats in shrublands, grasslands, woodlands, and deserts.
4. Graduates will be able to effectively communicate plans and decisions in light of existing policies and laws.
5. Graduates demonstrate a sound understanding of science and the application of the scientific method to addressing natural resource questions.