

Range Science

Range Science is a unique program that blends ecology and management for the purpose of sustaining rangelands. Rangelands are important for the diverse array of products and services they provide, including livestock production, wildlife habitat, clean air and water, and recreation to name a few. Rangeland ecosystems comprise over 40% of the earth's land and include grasslands, savannahs, shrublands, deserts, alpine meadows, marshes and wetlands. Rangelands are comprised mainly of native grasses, forbs, and shrubs which are extremely productive and rich in biodiversity.

Just as rangeland ecosystems are diverse, so too are the careers available in rangeland management. Professional career options for rangeland managers are in private and public land management, educators, ranching, wildlife and fisheries, hydrology and economics, scientists, and consultants. The majority of graduates in Range Science find employment with consulting firms, private industry, non-profit organizations, and state and federal agencies. Many of the state and federal agency jobs are as range conservationists with the USDA Forest Service and Natural Resource Conservation Service; USDI Bureau of Land Management, U.S. Fish and Wildlife Service and National Park Service; Bureau of Indian Affairs; and state agencies that include State Land Departments, State Health Departments and universities. Students in the Range Science program will take courses in animal sciences, biology, botany, chemistry, ecology, economics, natural resources management, plant sciences, range science, statistics, wildlife management, zoology, as well as the requirements of general education.

Major Requirements

Major: Range Science

Degree Type: B.S.

Required Degree Credits to Graduate: 128

General Education Requirements for Baccalaureate Degree

- A list of approved general education courses is available here (<http://bulletin.ndsu.edu/past-bulletin-archive/2017-18/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).
- General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review the major, minor, and program emphases requirements for minimum grade restrictions, should they apply.

Code	Title	Credits
Communication (C)		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing [†]		
Quantitative Reasoning (R) [†]		3
Science and Technology (S) [†]		10
Humanities and Fine Arts (A) [†]		6
Social and Behavioral Sciences (B) [†]		6
Wellness (W) [†]		2
Cultural Diversity (D) ^{*†}		
Global Perspectives (G) ^{*†}		
Total Credits		39

* May be satisfied by completing courses in another General Education category.

† May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

Major Requirements

Code	Title	Credits
Required Courses for Range Science		
AGRI 150	Agriculture Orientation (Students transferring in 24 or more credits do not need to take AGRI 150.)	1
AGRI 189	Skills for Academic Success ¹	1
ANSC 114	Introduction to Animal Sciences	3
ANSC 123	Feeds and Feeding	3
or ANSC 220	Livestock Production	

RNG 136	Introduction to Range Management	3
RNG 450	Range Plants	3
RNG 452	Geographic Information Systems in Range Survey	3
RNG 453	Rangeland Resources Watershed Management	3
or RNG 454	Wetland Resources Management	
RNG 456	Range Habitat Management	3
RNG 458	Grazing Ecology	3
RNG 460	Plant Ecology	3
RNG 462	Natural Resource and Rangeland Planning	3
RNG 491	Seminar	1
Other Required Courses		
BIOC 260	Elements of Biochemistry	4
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	4
BIOL 151 & 151L	General Biology II and General Biology II Laboratory	4
BOT 380	Plant Physiology	3
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)	4
CHEM 122	General Chemistry II (May satisfy general education category S)	3
CHEM 140	Organic Chemical Concepts and Applications	1
ECON 201	Principles of Microeconomics (May satisfy general education category B and G)	3
Select one of the following: (May satisfy general education category C)		3
ENGL 321	Writing in the Technical Professions	
ENGL 324	Writing in the Sciences	
ENGL 459	Researching and Writing Grants and Proposal	
MATH 103	College Algebra (or higher level)	3
PLSC 110	World Food Crops (May satisfy general education category S)	3
Select one of the following:		2-3
PLSC 219	Introduction to Prairie & Community Forestry	
PLSC 320	Principles of Forage Production	
PLSC 323	Principles of Weed Science	
PLSC 315 & 315L	Genetics and Genetics Laboratory (May satisfy general education category S)	4
SOIL 210	Introduction to Soil Science	3
SOIL 217	Introduction to Meteorology & Climatology (May satisfy general education category S)	3
Select one of the following:		3
SOIL 351	Soil Ecology	
SOIL 410	Soils and Land Use	
SOIL 444	Soil Genesis and Survey	3
STAT 330	Introductory Statistics (May satisfy general education category R)	3
ZOO 475	Conservation Biology	3
or ZOO 476	Wildlife Ecology and Management	
Total Credits		92

¹ AGRI189 is only required for first-time, first-year students--A first-time, first-year student is defined as a student who has not yet completed a college course as a college student. Students that are not first-time, first-year students that either transfer into the university or change their major are not required to take AGRI 189.

Minor Requirements

Range Science Minor

Minor Requirements

Required Credits: 16

Code	Title	Credits
Required Courses		
RNG 136	Introduction to Range Management	3
RNG 225	Natural Resource & Agro-Ecosystems	3
RNG 450	Range Plants	3
Select one of the following:		3
RNG 452	Geographic Information Systems in Range Survey	
RNG 453	Rangeland Resources Watershed Management	
RNG 460	Plant Ecology	
RNG 456	Range Habitat Management	3
or RNG 458	Grazing Ecology	
Elective Course: Seminar may be used to fulfill this elective.		1
Total Credits		16

Minor Requirements and Notes:

- A minimum of 8 credits must be taken at NDSU.
- Students must earn a minimum 2.00 GPA for the minor requirements.