

Range Science

www.ag.ndsu.edu/range

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: 132

General Education Requirements

First Year Experience (F):

AGRI 189	Skills for Academic Success (Students transferring in 24 or more credits do not need to take AGRI 189.)	1
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Communication (C):

ENGL 110	College Composition I	3
ENGL 120	College Composition II	3
One Course in Upper Level Writing: Select one of the following:		3
ENGL 321	Writing in the Technical Professions	
ENGL 324	Writing in the Sciences	
ENGL 459	Researching and Writing Grants and Proposal	
COMM 110	Fundamentals of Public Speaking	3

Quantitative Reasoning (R):

STAT 330	Introductory Statistics	3
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Science & Technology (S):

CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
PLSC 110	World Food Crops	3
PLSC 315	Genetics	3

Humanities & Fine Arts (A): Select from current general education list 6

Social & Behavioral Sciences (B):

ECON 201	Principles of Microeconomics	3
Select from current general education courses		3

Wellness (W): Select from current general education courses 2

Cultural Diversity (D): Select from current general education list

Global Perspectives (G):

ECON 201	Principles of Microeconomics	3
Total Credits		40

Major Requirements

General Education Requirements 40

Required Courses for Range Science

AGRI 150	Agriculture Orientation (Students transferring in 24 or more credits do not need to take AGRI 150.)	1
ANSC 114	Introduction to Animal Sciences	3
ANSC 123	Feeds and Feeding	3
or ANSC 220	Livestock Production	
RNG 336	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
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 122	General Chemistry II	3
CHEM 140	Organic Chemical Concepts and Applications	1
CHEM 260	Elements of Biochemistry	4
MATH 103	College Algebra (or higher level)	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	4
SOIL 210	Introduction to Soil Science	3
SOIL 217	Introduction to Meteorology & Climatology	3
Select one of the following:		3
SOIL 351	Soil Ecology	
SOIL 410	Soils and Land Use	
SOIL 444	Soil Genesis and Survey	3
ZOO 475	Conservation Biology	3
or ZOO 476	Wildlife Ecology and Management	

Degree Electives: Potential of a minimum of 17-18 credits to reach 132.	17
Total Credits	132

Minor Requirements

Range Science Minor

Minor Requirements

Required Credits: 16

Required Courses

RNG 225	Natural Resource & Agro-Ecosystems	3
RNG 336	Introduction to Range Management	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.