

## NATURAL RESOURCES MANAGEMENT

With increasing human pressure and a growing need to balance competing demands, we need new and better ways to manage our natural resources. The natural resources management (NRM) undergraduate program gives students flexible and powerful options to pursue their studies. Core courses provide a broad foundation in the biological and physical/earth sciences. Students then choose one of six emphases to further their skills and prepare for a variety of careers.

### The Program

The NRM undergraduate program is offered by the School of Natural Resource Sciences (SNRS) at North Dakota State University (NDSU). We are an interdisciplinary program that focuses on the science and management of natural resources. The program draws upon courses and resources across SNRS, including Entomology, Natural Resource Management, Range Science, and Soil Science, as well as additional programs and colleges across NDSU.

Students in NRM acquire a broad background in natural resources as well as an in-depth study in an area of interest. This exposure to multiple disciplines helps prepare students to find solutions to complex environmental problems. The undergraduate program curriculum is divided into core classes required of all students and an emphasis selected by the individual student from six areas of interest.

**NRM Core** – This group of courses provides each student a broad foundation while satisfying NDSU's General Education requirements.

**NRM Emphasis** – NRM offers six emphasis areas, each with their own combination of course requirements and electives. The emphases allow students to choose courses from a diverse group of approved electives.

**Entomology** – the study of insects and how they interact with people and with the environment. This emphasis area provides a strong scientific foundation with focus on insects, how they are studied, and their management.

**Environmental Sustainability, Outreach and Policy** – focuses on how to deal with environmental and social changes in a sustainable way. The emphasis area prepares students to work on environmental policy and public outreach combined with strategic thinking to predict sustainable paths on pressing environmental issues.

**Rangeland Ecology** – focuses on the broad study of native, non-forested ecosystems that cover more than 50% of the earth's land. These areas are managed as natural ecosystems to provide services that can benefit society. This emphasis area will prepare students by covering a variety of ecological topics including wildlife management, grassland restoration, and fire ecology.

**Rangeland Livestock Production** – focuses on the management of rangelands and grasslands for optimum livestock production and environmental benefits for society. Students will cover land management fields, the work of agencies and the private sector, as well as ranching operations.

**Soil Science** – the study of the soil as a component of natural and man-made systems and is the key factor in food production. It is the forefront of environmental and natural resource issues such as land use, soil contamination, ground water quality and waste disposal.

**Water, Habitat, and Environmental Management** – focuses in an interdisciplinary way on the environmental management of ecosystems. This emphasis area teaches basic and hands-on principles in the management of water, habitat (animals and plants), and the environment as a whole.

### The Faculty

Our faculty come from across the School of Natural Resource Sciences and are dedicated to providing quality instruction and advising.

### Career Opportunities

NRM graduates are prepared with the skills and knowledge for facing complex problems in natural resources, agriculture, and the environment. Common career options include natural resources jobs with government agencies at the federal, state, or local level; agricultural, conservation and environmental non-profit organizations, extension and outreach positions, and private sector employment, including consulting in addition to preparation for advanced degrees.

## Natural Resources Management Plan of Study

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

<b>First Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
BIOL 150 General Biology I and 150L General Biology I Laboratory	4	BIOL 151 General Biology II and 151L General Biology II Laboratory	4
ENGL 110 College Composition I	4	ENGL 120 College Composition II	3
NRM 150 Natural Resource Management Orientation	1	MATH 103 College Algebra	3
NRM 225 Natural Resources & Agrosystems	3	Gen Ed Humanities & Fine Arts	3
RNG 136 Introduction to Range Management	3	Gen Ed Wellness	2
	<b>15</b>		<b>15</b>
<b>Second Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
CHEM 121 General Chemistry I and 121L General Chemistry I Laboratory	4	EMGT, POLS, or SOC elective	3
COMM 110 Fundamentals of Public Speaking	3	SOIL 210 Introduction to Soil Science	3
ECON 201 Principles of Microeconomics	3	STAT 330 Introductory Statistics	3
ENT 210 Insects, Humans and the Environment	3	Emphasis Core or Elective Credits	6
RNG 213 Rangeland Sampling Techniques	3		
	<b>16</b>		<b>15</b>
<b>Third Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
ENG 321 Writing in the Technical Professions or 324 Writing in the Sciences or 459 Researching and Writing Grants and Proposal	3	NRM 421 Environmental Outreach Methods	3
PHIL 215 Contemporary Moral Issues or 225 Environmental Ethics	3	RNG 452 Geographic Information Systems in Range Survey or GEOG 455 Introduction to Geographic Information Systems	3
	<b>15</b>	Emphasis Core or Elective Credits	9
			<b>15</b>
<b>Fourth Year</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
Emphasis Core or Elective Credits	14	NRM 462 Natural Resource and Rangeland Planning or RNG 462 Natural Resource and Rangeland Planning or SOIL 462 Natural Resource and Rangeland Planning	3
	<b>14</b>	Emphasis Core or Elective Credits	12
			<b>15</b>
<b>Total Credits: 120</b>			

Natural Resources Management Emphasis Areas requirements can be found on the bulletin website in the Plan of Study: <https://bulletin.ndsu.edu/programs-study/undergraduate/natural-resources-management/#planofstudytext>

View NDSU equivalencies of transfer courses at: [www.ndsu.edu/transfer/equivalencies](http://www.ndsu.edu/transfer/equivalencies)

### For Further Information

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**DEPT WEBSITE:** [www.ndsu.edu/snrs/](http://www.ndsu.edu/snrs/)