

Student: _____

ID#: _____

Advisor: _____

College: _____

Natural Resources Management

Bachelor of Science Degree

North Dakota State University



Welcome to the NRM Major

Natural Resources Management (NRM) is an interdisciplinary major for students interested in managing society's impacts on the environment. NRM is offered as a four-year Bachelor of Science (BS) degree.

The NRM Core courses (listed in the curriculum guide at right) provide a broad foundation in the biological, physical/earth and social sciences. The NRM Emphasis courses (listed on the back) complete the program with focused study in one of six natural resource areas.

Core Electives			
These 23 required units are part of the 128 total.			
D Gen Ed Cultural Diversity: one course from the Core Electives below must double-count for Cultural Diversity			
Free Electives: 6 units NOTE: MATH 103 College Algebra must be taken as a free elective if you do not transfer or test out of the course.			
		3	
		3	
B Gen Ed/NRM Social Science: 6 units Choose Stream I or II. Complete both courses listed.			
Stream I		Stream II	
SOC 110 Intro to Sociology	3	POLS 110 Intro to Political Sci	3
SOC 431 Environ Sociology	3	POLS 453 Environ Policy & Polittic	3
W Gen Ed Wellness: 2 units Refer to the NDSU Gen Ed list for course offerings.			
		2	
A Gen Ed Humanities & Fine Arts: 6 units Refer to the NDSU Gen Ed list for course offerings.			
		3	
		3	
C/UDW Gen Ed Upper-Division Writing: 3 units Select one course. Requires junior standing.			
ENGL 320 Bus & Prof Comm	3	ENGL 324 Wrtg in the Sciences	3
ENGL 321 Wrtg in the Tech Prof	3	ENGL 358 Wrtg in Hum/Soc Sci	3

Graduation from NRM requires satisfactory completion of 128 units in coursework outlined in this curriculum (to include 37 units from 300/400-level courses) and a 2.0 institutional GPA.

Curriculum Guide effective Fall 2009												
FALL						SPRING						
Course	Units	Grade	Gen Ed	Course	Units	Grade	Gen Ed	Course	Units	Grade	Gen Ed	
Freshman (<27 units)	AGRI 189 Skills for Academic Success	1		F	BIOL 111* Concepts of Biology	3		S				
	BIOL 124 Environmental Science	3		S	ENGL 120 College Composition II	3		C				
	CHEM 117* Chemical Concepts & App	3		S	NRM 225 Natural Res & Agro-ecosys	3		G				
	ENGL 110~ College Composition I	3		C								
	NRM 150 NRM Orientation	1										
					CHEM 117L* OR BIOL 111L*	1		L				
	Core Elective (Wellness)	2		W	Core Elective (Hum/Fine Arts)	3		A				
Core Elective (NRM Social Sci)	3		B	Core Elective (Free. MATH 103 may be required.)	3							
Total				16	Total				16			
Sophomore (27-59 units)	BIOL 151 General Biology II	3			CHEM 121 General Chem I	3						
	BIOL 151L General Biology II Lab	1			CHEM 121L General Chem I Lab	1						
	COMM 110 Fundmntls Public Speaking	3		C	NRM 264 Natural Res Mgmt Systems	3						
	ECON 201 Prin of Microeconomics	3		B	SOIL 210 Intro to Soil Science	3						
	GEOL 105 Physical Geology	3			STAT 330 ^ Introductory Statistics	3		R				
	Core Elective (Free Elective)	3			EMPHASIS	3						
Total				16	Total				16			
Junior (60-89 units)	ECON 481 Natural Resource Econ	3			BIOL 364 General Ecology	3						
	POLS 215 Problems/Policies Am Gov	3			HIST 434 Environmental History	3						
					(or POLS 360 or POLS 422)							
	Core Elective (Upper-Division Writing)	3		C/UDW	Core Elective (NRM Social Sci)	3						
	EMPHASIS	7			EMPHASIS	7						
Total				16	Total				16			
Senior (90+ units)	RNG 452 GIS in Range Survey	3			NRM 491 Seminar (Capstone)	2						
					(or GEOG 455)							
	NRM 431 NEPA & Env Impact Asmnt	3			EMPHASIS	13						
	Core Elective (Hum/Fine Arts)	3		A								
	EMPHASIS	8										
Total				17	Total				15			
* CHEM 117 and BIOL 111: Students entering NRM with chemistry and/or biology courses at levels higher than CHEM 117 or BIOL 111 may substitute these courses with emphasis electives or transfer units. If CHEM 117 and/or BIOL 111 are necessary, the student may select either CHEM 117L or BIOL 111L, as appropriate, to accompany these courses.									Total Units		128	

^ STAT 330: Students in Pollution Control substitute MATH 166 Calculus II.

~ ENGL 110: First year students with a composite ACT score of ≥ 21 should register for ENGL 120 (unless transfer credit for ENGL 120 is received). If ENGL 120 is completed with a grade of 'C' or better, 3 units will be awarded for ENGL 110 with a passing grade (P). For more details on NDSU's English Placement process, go to www.ndsu.edu/cfwriters.

NRM Emphasis Areas

Natural Resources Management offers six emphasis areas. Each requires the completion of 38 total units to include both required and elective courses. Elective courses may be selected by the student from the approved electives lists provided for each emphasis.

- ▶ **Declaring an emphasis.** Students should declare an emphasis with the Office of Registration & Records by their junior year. Upon graduation, the emphasis is recorded on the academic transcript along with the degree.
- ▶ **Prerequisites.** Some courses require a prerequisite. Refer to Campus Connect or the NDSU Bulletin.

- ▶ **Substitutions:**
The following courses are accepted as electives in all emphasis areas:
- NRM courses (may not be double-counted with the NRM Core);
- A maximum of 3 units of Field Experience (396/496);
- A maximum of 3 units of Co-op Ed (397/497).
All other substitutions require NRM advisor approval.

Biotic Resources Science			
Required: 10 units		Units	Register...
BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring
CHEM 122 Gen Chem II		3	Junior Fall
CHEM 240 Survey of Organic Chem		3	Senior Fall
Electives			
Choose 28 units from the approved electives list for this emphasis. 21 of the 28 units must be from 300-400 level courses.			
Course	Units	Course	Units

Environmental Communication			
Required: 16 units		Units	Register...
COMM 112 Media/Social Change		3	Soph Fall or Spring
COMM 200 Intro Media Writing		3	Junior Fall
COMM /PS/CJ 325 Research <i>or (SOC 340 + 341 Methods + Lab)</i>		4 or (3 + 1)	Junior Fall (Junior Fall)
COMM 450 Issues: Env Comm		3	Junior Spring
COMM 485 Crisis Comm in PR		3	Senior Spring
Electives			
Choose 22 units from the approved electives list for this emphasis. 11 of the 22 units must be from 300-400 level courses.			
Course	Units	Course	Units

Natural Resources Economics			
Required: 9 units		Units	Register...
MATH 146 Applied Calc I (<i>or 165</i>)		4 or (4)	Soph Fall
ECON 341 Intern Microecon		3	Soph Spring
STATS 331 Regression Analysis		2	Junior Spring
Electives			
Choose 29 units from the approved electives list for this emphasis. 16 of the 29 units must be from 300-400 level courses.			
Course	Units	Course	Units

Physical/Earth Resources Science			
Required: 16 (18) units		Units	Register...
BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring
CHEM 122/122L Gen Chem II + Lab		3 + 1	Junior Fall
MATH 146 Applied Calc I (<i>or 165</i>)		4 or (4)	Junior Fall
GEOL 412 Geomorphology <i>or (SOIL 444 Soil Genesis/Survey)</i>		3 or (4)	Senior Fall (Senior Fall)
SOIL 491 Seminar (<i>or ASM 475</i>)		1 or (2)	Senior Fall or Spring
Electives			
Choose 22 (20) units from the approved electives list for this emphasis. 17 of the 22 (or 15 of the 20) units must be from 300-400 level courses.			
Course	Units	Course	Units

Pollution Control			
Required: 20 units		Units	Register...
BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring
CE 309 Fluid Mechanics		3	Junior Fall
CHEM 122/122L* Gen Chem II + Lab		3 + 1	Junior Fall
ME 222 Engr Mechanics II		3	Junior Fall
CE 370 Intro to Environ Engineering		3	Junior Spring
CE 408 Water Resources & Supply		3	Junior Spring
Electives: Work with your advisor to select 18 units from the approved electives list for this emphasis. 12 of the 18 units must be from 300-400 level courses.			
Course	Units	Course	Units

Social Sciences			
Required: 7 units		Units	Register...
SOC 340 + 341 Methods + Lab		3 + 1	Junior Fall
SOC 422 Social Theory <i>or (ANTH 480 Develop Anth Theory)</i>		3 or (3)	Junior Spring (Junior Spring)
Electives			
Choose 31 units from the approved electives list for this emphasis. 14 of the 31 units must be from 300-400 level courses.			
Course	Units	Course	Units

