

Name: _____

NORTH DAKOTA STATE UNIVERSITY
 School of Natural Resources Management
Natural Resources Management

T = Transfer Credit
 IP = Course is 'In Progress'

Fall 2012

ID: _____

General Education Requirements - 40 Credits Required					Natural Resources Management Major - 82 Credits Required					
Course	Number	Course Title	Credits	Grade	Course	Number	Course Title	Credits	Grade	
First Year Experience (F)			1 Sem Credit		BIOL	111	Concepts of Biology ****	3		
AGRI	189 ¹	Skills for Academic Success	1		BIOL	151/L	General Biology II/Lab	3/1		
Communication (C)			12 Sem Credits		BIOL	364	General Ecology	3		
ENGL	110	College Composition I	3		CHEM	117	Chemical Concepts & Appl****	3		
ENGL	120	College Composition II	3		CHEM or	117/L or	Chemical Concepts & Appl/Lab**** or Concepts of Biology Lab****	1		
COMM	110	Fund of Public Speaking	3		BIOL	111L				
ENGL		Upper Level Writing *	3		ECON	481	Natural Resources Economics	3		
Quantitative Reasoning (R)			3 Sem Credits		HIST	434	Environmental History	3		
STAT	330	Introductory Statistics***	3		NRM	150	NRM Orientation	1		
Science & Technology (S)			10 Sem Credits		NRM	225	Natural/Agro-ecosystems	3		
BIOL	124	Environmental Science	3		NRM/SOIL	264	Natural Resources Mgt Systems	3		
CHEM	121	General Chemistry I	3		NRM	431	NEPA & Environ Impact Assessment	3		
CHEM	121L	General Chemistry I Lab	1		NRM	491	Seminar (Capstone)	2		
GEOL	105	Physical Geology	3		POLS	215 or	Problems/Policies Am Govt. OR Principles of Public Adm OR State/Local Politics	3		
Humanities & Fine Arts (A)			6 Sem Credits							360 or
			3							422
			3		RNG or	452 or	GIS Range Survey OR Biogeography	3		
Social & Behavioral Sciences (B)			6 Sem Credits		GEOG	455				
ECON	201	Principles of Microeconomics	3		**SOC or	431 or	Environmental Sociology OR Environmental Policy/Politics	3		
**SOC or	110	Introduction to Sociology or	3		POLS	453				
POLS		Introduction to Political Science								
Wellness (W)			2 Sem Credits		SOIL	210	Introduction to Soil Science	3		
			2		EMPHASIS ELECTIVES - 38 minimum credits required					
Cultural Diversity (D)					The NRM Emphasis courses (listed on the backside of this guide) complete the program with focused study in one of six natural resource areas.					
Global Perspectives (G)										
GEOL	105	Physical Geology								

¹Students transferring in 24 or more credits do not need to take AGRI 189.

*Select from ENGL 320, 321, 324 or 358 to satisfy the Upper Level Writing for General Education.

**Choose Stream I or II. Complete both courses listed.	Stream One	Stream Two
	SOC 110	POLS 110
	SOC 431	POLS 453

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

****BIOL 111 & CHEM 117: Students entering NRM w/ CHEM and/or BIOL courses at levels higher than CHEM 117 or BIOL 111 may substitute these courses with emphasis electives or transfer credits. 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.

Minimum Credits Required for Graduation: 128

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 and Records as soon as the emphasis is determined. Upon graduation, the emphasis is recorded on the academic transcript along with the degree. Pre-requisites - Some courses require a prerequisite. Refer to Campus Connection and the course details for information.

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				Environmental Communication				Natural Resources Economics									
Required: 10 units		Units	Register...	Required: 16 units		Units	Register...	Required: 9 units		Units	Register...						
BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring	COMM 112 Media/Social Change		3	Soph Fall or Spring	MATH 146 Applied Calc I (or 165)		4 or (4)	Soph Fall						
CHEM 122 Gen Chem II		3	Junior Fall	COMM 200 Intro Media Writing		3	Junior Fall	ECON 341 Interm Microecon		3	Soph Spring						
CHEM 240 Survey of Organic Chem		3	Senior Fall	COMM /PS/CJ 325 Research		4 or	Junior Fall	STATS 331 Regression Analysis		2	Junior Spring						
RNG 336 Intro Range Mgmt		3	Junior Fall	<i>or (SOC 340 + 341 Methods + Lab)</i>		(3 + 1)	(Junior Fall)	Electives: Choose 29 units from the approved electives list for this emphasis. 16 of the 29 units must be from 300-400 level courses.									
RNG/NRM 453 Range Watershed		3	Junior or Senior Spring	COMM 450 Issues: Env Comm		3	Junior Spring										
Electives: Choose 28 units from the approved electives list for this emphasis. 21 of the 28 units must be from 300-400 level courses.				COMM 485 Crisis Comm in PR		3	Senior Spring	AGEC 339* Quantitative Methods		3	GEOG 262 Geog North Am	3					
				Electives: Choose 22 units from the approved electives list for this emphasis. 11 of the 22 units must be from 300-400 level courses.				AGEC 347* Prin Real Estate		3	HNES 427* Leisure & Soc	3					
BOT 314* Systematic Botany		3	RNG/NRM 454 Wetland Res Mgmt	3	COMM 260 Internet Web Design		3	COMM 433 Legal Comm		3	AGEC 375 Applied Ag Law	3	NRM 401 Urban-Ecosystem Mgt.	3			
BOT 380* Plant Phys (380 L)		3 (1)	RNG 456* Range Habitat Mgmt	3	COMM 261 Web Development		3	COMM 436 Issues in Mass Comm		3	AGEC 484* Ag Policy	3	NRM 402 River & Stream Res. Mgt.	3			
BOT/RNG 460* Plant Ecology		3	RNG 458* Grazing Ecology	3	COMM 301 Rhet Traditions		3	COMM 442 Info Tech/Media		3	BUSN 350* Found of Mgmt	3	NRM 420 Scenarios in Nat. Res. Mgt.	2			
ENT 350 Gen Entomology		3	SOIL 217* Meteorology & Climatology	3	COMM 310 Adv Media Writing		3	COMM 443 Media/Public Opinion		3	COMM 315 Small Group Com	3	NRM 421 Enviro. Outreach Mthds.	3			
MICRO 202 Intro Microbiol (202 L)		2 (1)	ZOO 360* Animal Behavior	3	COMM 345 Broadcast Production		3	COMM 445 Adv Broadcasting		3	ECON 202 Macroeconomics	3	POLS 220 Intl Politics	3			
NRM 401 Urban-Ecosystem Mgt.		3	ZOO 450* Invertebrate Zoo	4	COMM 362 Design for Print		3	COMM 450 Issues in Comm		3	ECON 324* Money & Banking	3	POLS 360 Prin of Public Admin	3			
NRM 402 River & Stream Res. Mgt.		3	ZOO 452* Ichthyology	3	COMM 370 Public Relations		3	COMM 472 PR Campaigns		3	ECON 343* Interm Macroecon	3	POLS 442 Global Policy Issues	3			
NRM 420 Scenarios in Nat. Res. Mgt.		2	ZOO 454* Herpetology	3	COMM 383 Org Comm I		3	PC 201 Peace & Conflict		3	ECON 410* Econometrics	3	POLS 444* International Law	3			
NRM 421 Enviro. Outreach Mthds.		3	ZOO 456* Ornithology	3	COMM 402 Contemp Rhetoric		3	NRM 420 Scenarios in NRM		3	ECON 456* Hist of Econ Thought	3	POLS 452 Comp Political Econ	3			
PLSC 219 Prairie/Com Forestry		2	ZOO 458* Mammalogy	3	COMM 431 Comm Ethics		3	NRM 421 Enviro. Outreach Mthds.		3	ECON 461* Econ Development	3	POLS 453 Env Policy/Politics	3			
PLSC/BOT/ZOO 315 Genetics (315 L)		3 (1)	ZOO 462* Physiological Ecology	3	Pollution Control						ECON 472* International Trade		4	SOC 403 Soc of Great Plains	3		
PLSC 323 Prin Weed Science		3	ZOO 470* Limnology	4							Required: 20 units		Units	Register...	ECON 480* Industrial Org		3
PLSC 355* Woody Lndscp Plants		3	ZOO 475* Conservation Biol	3	BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring		Social Sciences							
RNG 326 Model Range/Eco-Sys		3	ZOO 476* Wildlife Eco/Mgmt	3	CE 309 Fluid Mechanics		3	Junior Fall						Required: 7 units		Units	Register...
RNG/BOT 450* Range Plants		3	ZOO 477* Wild/Fish Mgmt Tech	3	CHEM 122/122L* Gen Chem II + Lab		3 + 1	Junior Fall		SOC 340 + 341 Methods + Lab		3 + 1	Junior Fall				
Physical/Earth Resources Science				ME 222 Engr Mechanics II		3	Junior Fall		SOC 422 Social Theory		3 or	Junior Spring					
Required: 16 (18) units		Units	Register...	CE 370 Intro to Environ Engineering		3	Junior Spring		<i>or (ANTH 480 Develop Anth Theory)</i>		(3)	<i>(Junior Spring)</i>					
BIOL 150/150L Gen Biology I + Lab		3 + 1	Junior Fall or Spring	CE 408 Water Resources & Supply		3	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.								
CHEM 122/122L Gen Chem II + Lab		3 + 1	Junior Fall	Electives: Choose 18 units from the approved electives list for this emphasis. 12 of the 18 units must be from 300-400 level courses.													
MATH 146 Applied Calc I (or 165)		4 or (4)	Junior Fall					AIR / SOLIDS		BIOTIC		ANTH 204 Arch & Prehistory		3	EMGT 481 Disaster Analysis		3
GEOL 412 Geomorphology		3 or	Senior Fall	ABEN 499 Biofuels		3	ABEN 499 Biofuels		ANTH 205 Human Origins		3	ENGL 474 Native Am Lit		3			
<i>or (SOIL 444 Soil Genesis/Survey)</i>		(4)	(Senior Fall)	CE 472* Solid Waste Mgmt		3	BOT 380* Plant Phys (380 L)		ANTH 206 Peoples of the World		3	GEOG 262 Geog of North Am		3			
SOIL 491 Seminar (or ASM 475)		1 or (2)	Senior Fall or Spring	CE 473* Air Pollution		3	BOT/RNG 460 Plant Ecology		ANTH 433* Apes & Human Evolution		3	HIST 439 Hist of Am Agriculture		3			
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.				SOIL 217* Meteorology & Climatology		3	MICRO 350 Microbiology (350 L)		ANTH 446 Current Prob Paleoanthro		3	NRM 401 Urban-Ecosystem Mgt.		3			
				ABEN 464* Conservation/Irrigation		4	NRM 420 Scenarios in Nat. Res. Mgt.		2	ZOO 470 Limnology		ANTH 450 Cultural Anthro		3	NRM 420 Scenarios in Nat. Res. Mgt.		2
ASM 225* Computer App in ASM		3	NRM 421 Enviro. Outreach Mthds.	3	SOIL 447* Microclimatology		3	ZOO 476 Wildlife Eco/Mgmt		3	ANTH 458 Indians of the Plains		3	NRM 421 Enviro. Outreach Mthds.		3	
ASM 354* Elec & Electronic Apps		3	PHYS 211* College Phys I (211 L)	3 (1)	EARTH / SOILS				ZOO 477* Wild/Fish Mgmt Tech		3	ANTH 462 Cultural Ecology		3	POLS 215 Problems & Policies		3
ASM 454* Prin of Site Specific Ag		3	RNG 336 Intro Range Mgmt	3	CHEM 240* Survey of Organic Chem		3	ZOO 477* Wild/Fish Mgmt Tech		3	CJ 201 Intro to Criminal Justice		3	POLS 225 Comparative Politics		3	
CE 204* Surveying		4	RNG/NRM 454 Wetland Res Mgmt	3	GEOL 300* Environ Geology		3	WATER		EMGT 101 (201) Emerg, Disast, Catast		3	POLS 360 Prin of Public Admin		3		
CHEM 240* Survey of Organic Chem		3	SOIL 217* Meteorology & Climatology	3	SOIL 322* Soil Fertility & Fert		3	ABEN 464* Conservation/Irrigation		EMGT 261 Disaster Preparedness		3	POLS 422 State & Local Politics		3		
GEOL 105 L Phys Geol Lab		1	SOIL 322* Soil Fertility & Fert	3	SOIL 351* Soil Ecology		3	CE 410* Water/Wastewater Engr		EMGT 262 Disaster Mitigation		3	POLS 453 Env Policy/Politics		3		
GEOL 300* Environ Geology		3	SOIL 351* Soil Ecology	3	SOIL 410* Soils & Land Use		3	CE 421* Open Channel Flow		EMGT 263 Disaster Response		3	SOC 403 Soc of Great Plains		3		
GEOL 412* Geomorphology		3	SOIL 410* Soils & Land Use	3	SOIL 433* Soil Physics		3	CE 477* Applied Hydrology		EMGT 264 Disaster Recovery		3	SOC 405 Community Dev		3		
GEOL 414* Hydrogeology		3	SOIL 433* Soil Physics	3	SOIL 444* Soil Genesis & Survey		4	CE 478* Water Quality Mgmt		EMGT 414 Spatial Analysis in EM		3	SOC 418* Social Psychology		3		
GEOL/CHEM 428* Geochem		3	SOIL 444* Soil Genesis & Survey	4	SOIL 447* Microclimatology		3	GEOL 414* Hydrogeology		EMGT 415 Rural Emerg Mgmt		3	SOC 420 Sociology of Disaster		3		
MICRO 202 Intro Microbiol (202 L)		2 (1)	SOIL 447* Microclimatology	3	SOIL 465* Soil & Plant Analysis		3	GEOL/CHEM 428* Geochem		EMGT 451 Floods, Blizzrds, Tornad		3	SOC 431* Environ Sociology		3		
NRM 401 Urban-Ecosystem Mgt.		3	SOIL 465* Soil & Plant Analysis	3	SOIL 480* Soils & Pollution		3	RNG/NRM 453 Range Watershed		EMGT 453 Emerg Mgmt Law		3	SOC 439* Social Change		3		
NRM 402 River & Stream Res. Mgt.		3	SOIL 480* Soils & Pollution	3							EMGT 461 Bus Continuity/Crisis Mgmt		3	SOC 443 Intl Disasters		3	
											EMGT 463 Voluntary Agency		3	SOC 465 Applied Demographics		3	

* Courses noted with "*" indicate there may be prerequisites required. Please refer to the current Course Bulletin and check with your Advisor prior to registering.