

**BS in Natural Resources, Ecology, Management and Restoration of Rangelands** option catalog year 2020-21

**General Education Requirements**

<b>English Composition</b>		
ENGL 101 and ENGL 102	3	3
OR ENGL 106, 107 and 108	3	3
OR ENGL 109H		3

**2nd Language**  
(2<sup>nd</sup> semester proficiency by credit or exam; C or better)

**Tier I**

Individuals and Societies: Select 2 courses from 150s		3
		3

Traditions and Cultures: Select 2 courses from 160s		3
		3

NOTE: you do not need any 170A, B, C courses

**Tier II**

Art or Humanities		3
*Individuals and Societies: ECON 200 suggested		3

**Diversity requirement:** One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation. Some Tier I and Tier II courses also satisfy this requirement.

**Supporting Coursework**

Statistics: MATH 163 or 263, OR PSY 230 OR SBS 200		3
Economics: *ECON 200 *If you count ECON 200 towards your Tier II Individ, substitute a technical elective		3
General Chemistry: CHEM 151 AND CHEM 152	4	4
Soil Science: ENVS 200 and 201		4
General Biology: MCB 181R/L: Intro Biol I		4
ECOL 182R/L: Intro Biol II		4

**Natural Resources Core Courses (18 units)**

RNR 200: Conservation of Natural Environments (Fall/Sum)		3
RNR 230R/L: Field Botany (Fall)	2	1
RNR 316: Natural Resources Ecology (Fall/Sp)		3
RNR 321: Ecological Surveys and Sampling (Fall/Sp)		3
RNR 384: Natural Resources Management Practices (Spring)		3
RNR 480: Natural Resources Policy and Law (Spring)		3

**Core Themes (13 units) select one course from each area**

Math: MATH 109C or MATH 112		3
Technical Skills: RNR 403, RNR 417, RNR 429, GEOG 330, WSM 460, WSM 462		3
Technical Writing: ENGL 308, ENGL 313, ENGL 340, ENGL 414, ENVS 408, ENVS 415		3
Oral or Media Communication: ALC 422, COMM 113, COMM 119, JOUR 455, JOUR 472, RNR 495A, SBE 202, SCI 401		3
SNRE requirement		1

**Option Specific Courses (15 units)**

RAM 382 Rangeland Plant Communities (Spring)		3
RAM 436A Grazing Ecology and Management (Fall)		2
RAM 446 Restoration and Management of Wildland Vegetation (Spring)		4
RAM 456A Rangeland Inventory and Monitoring (Fall)		4
RAM 487 Rangeland Management Planning (Odd Springs)		2

**Technical Electives (26 units):**

		( )
		( )
		( )
		( )
		( )
		( )
		( )
		( )
		( )
		( )

**Graduation Requirements**

- at least 120 units
- 42 upper division units
- 30 or more units completed at the UA
- at least a 2.0 major and cumulative GPA.
- Mid-career writing assessment fulfilled with a B or higher in English Composition OR with Technical Writing requirement.

	FALL			SPRING		
	Course Title	Units	Prerequisite?	Course Title	Units	Prerequisite?
Freshman	CHEM 151 OR CHEM 141 AND 143	4	MATH 112 or placement	CHEM 152 OR CHEM 142 AND 144	4	First semester CHEM
	ENGL 101 or 109H	3		ENGL 102	3	
	<b>RNR 200 Conservation of Natural Environments</b>	3		ECOL 182R and L General Biology Lecture and Lab	4	
	MATH 112 College Algebra	3	placement test	Tier 1 Individuals and Societies	3	
	Tier 1 Individuals and Societies	3		Tier 1 Traditions and Cultures	3	
	TOTAL	16		TOTAL	17	
Sophomore	Tier 1 Traditions and Cultures	3		ENVS 200, 201: Soil Science lab and lecture	4	First semester CHEM
	Statistics: MATH 163 or 263, PSY 230 or SBS 200	3	MATH 112 or placement	Tier 1 Individuals and Societies	3	
	<b>RNR 230R Field Botany lecture</b>	2		ECON 200 (Economics)	3	
	<b>RNR 230L Field Botany lab</b>	1		<b>RNR 384 Natural Resources Management Practices</b>	3	
	MCB 181R and L General Biology Lecture and Lab	4	MATH 112 or placement; 1st semester CHEM			
Oral or Media Communication: COMM 113 or 119, ALC 422, JOUR 455, JOUR 472, SCI 401, SBE 202, RNR 405A	3					
	TOTAL	16		TOTAL	13	
Junior	<b>RNR 316 Natural Resources – Ecology</b>	3	ECOL 182R, ECOL 182L, RNR 230	<b>RNR 321 Ecological Surveys and Sampling</b>	3	Statistics
	Tier 2 Arts or Humanities Elect.	3		RAM 382 Rangeland Plant Communities	3	RNR 230R and RNR 230L
	Technical Electives	6		Technical Writing: ENGL 308, 313, 340, or 414, ENVS 408 or 415	3	
	Technical Skills: RNR 403, RNR 417, RNR 429, GEOG 3	3		Technical Electives	6	
		TOTAL	15		TOTAL	15
Senior	SNRE requirement	1		RAM 446 Management and Restoration of Wildland Vegetation	4	
	RAM 456a Rangeland Inventory and Monitoring	4		RAM 487 Rangeland Management Planning (odd years only)	2	
	Technical Electives	7		Technical Electives	6	
	RAM 436a Grazing Ecology & Management	2		<b>RNR 480 Natural Resources Policy and Law</b>	3	RNR 200
		TOTAL	15		TOTAL	15
Diversity Emphasis: One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation						
2nd semester language proficiency required--not included in this plan						
Catalog Year 2020-21						

## POTENTIAL CAREER TRACKS

**Restoration Ecologist/ Preserve Manager**

ECOL 406R      AREC 350  
ECOL 406L

4 units from the following:  
PLS 360      PLS 312

3 units from the following:  
RNR 438      WSM 408

6-8 units from the following:  
ENVS 461      WFSC 444  
RNR 403

**Range Management Specialist GS-5 Office of Personnel Management & Society for Range Management Certification**

PLS 360      ENVS 431  
ACBS 477

9 units from the following:  
ECOL 406R&L  
RNR 438      WFSC 455R  
WFSC 441      WSM 460  
WFSC 444      WSM 462  
WSM 465      WSM 468

Strongly Recommended:  
RNR 403 or      RNR 417

**Environmental Communication, Education, and Interpretation**

6 units from the following:  
AGTM 422      JOUR 413  
AED 438      SOC 333  
JOUR 455      PSYC 329  
JOUR 472      PSYC 374

6 units from the following:  
ANTH 202      ANTH 409  
ANTH 307      ECOL 406R  
ANTH 331      WFSC 444  
WFSC 447

6 units from the following:  
AREC 476      GEOG 210  
GEOG 373      GEOG 380  
GEOG 459

**Ecologist Series GS-5 Office of Personnel Management**

6 units from the following:  
PHYS 102      HWR 250  
ATMO 171      GEOS 251

6 units from the following:  
ECOL 183      WFSC 441  
ECOL 320      WFSC 444  
ECOL 380      ECOL 472  
ECOL 406R      ECOL 482  
ECOL 438      ECOL 485

Strongly Recommended:  
RNR 403      RNR 417

**Peace Corps/ International Conservation & Development**

At least 2 semesters of a second language, and 4 recommended

1 course from the following:  
ANTH 202      GEOG 210  
GEOG 373

1 course from the following:  
ANTH 331      GEOG 380

1 course from the following:  
AGTM 422      SOC 333  
PSYC 360

**Research in Rangeland Science & Management**

ENG 414      RAM 499  
RNR 492

3 units from the following:  
PHIL 202      PHIL 421  
PHIL 305

9 units from the following:  
MATH 113      ENVS 431  
PHYS 102      CHEM 241a  
GEOS 251      CHEM 243a

**Ranch Management**

PLS 360      ACBS 431  
ACBS 336A or      ACBS 477

9 units from the following:  
ECOL 406L      WFSC 455L  
ECOL 406R      WFSC 455R  
RNR 438      WSM 460A  
WFSC 441      WSM 462  
WFSC 444      WSM 468  
WFSC 447

3 units from the following:  
ACBS 213      ACBS 477  
ACBS 315R      ACBS 480B  
ACBS 480B  
ACBS 336A      AREC 217

3 units from the following:  
GEOG 483      RNR 422  
RNR 403      ENVS 461  
RNR 417      WSM 330

**Natural Resources Planning**

1 unit from the following:  
AREC 217      AREC 373  
AREC 350      AREC 476

3 units from the following:  
ATMO 171  
PLG 301

3 units from the following:  
GEOG 371      GEOG 459  
GEOG 401a      GEOG 461  
GEOG 401b      GEOG 465

Strongly Recommended:  
ENVS 453  
RNR 403 or      RNR 417

**Additional Career Tracks:** Tribal Range Management Specialist  
Soil Science GS-5, Office of Personnel Management  
Cooperative Extension  
OPM Botanist GS-5  
Environmental Law and Policy  
Environmental Assessment  
Wildlife Biologist GS-5 Office of Personnel Management

**Management**

For further details on any of these potential career tracks, see your faculty advisor.

**Soil Conservation GS-5 Office of Personnel Management**

ENVS 431      PLS 312  
ENVS 461      PLS 360

Strongly Recommended:  
CHEM 241      CHEM 243  
RNR 403 or      RNR 417