# RANGELAND SCIENCES UNDERGRADUATE MAJOR (BS, HBS)

### This major offers the following option(s):

- Habitat Management (http://catalog.oregonstate.edu/collegedepartments/agricultural-sciences/animal-rangeland-sciences/ rangeland-sciences-bs-hbs/habitat-management-option/)
- Pastoral Systems of the World (http://catalog.oregonstate.edu/ college-departments/agricultural-sciences/animal-rangelandsciences/rangeland-sciences-bs-hbs/pastoral-systems-world-option/)
- Sustainable Livestock Ranching (http://catalog.oregonstate.edu/ college-departments/agricultural-sciences/animal-rangelandsciences/rangeland-sciences-bs-hbs/sustainable-livestock-ranchingoption/)
- Sustainable Rangeland Ecosystem Stewardship (http:// catalog.oregonstate.edu/college-departments/agricultural-sciences/ animal-rangeland-sciences/rangeland-sciences-bs-hbs/sustainablerangeland-ecosystem-stewardship-option/)

### Also available at LaGrande and via Ecampus.

Rangeland sciences is about the study and sustainable management of rangelands across a variety of biomes, from arid deserts, to mesic grasslands, to tropical savannahs. The program takes an interdisciplinary approach to provide advanced scientific knowledge regarding multiple ecological processes and social drivers influencing rangeland ecosystems around the globe. Students gain the skills and knowledge needed to deeply understand and effectively manage rangelands for improved productivity and enhanced ecosystem resilience. The end goal is that students graduating from the program will be able to integrate contemporary rangeland ecology and management principles into a systems-based decision-making framework that promotes ecological resilience, sustainable societies, and thriving economies in socioecological rangeland ecosystems.

#### Major Code: 292

- Identify a subset of up to 100 rangeland plants. Correctly spell both common and scientific names. Describe plant species ecological characteristics.
- Students will demonstrate knowledge of appropriate use and competency using common Rangeland Analysis methods.
- Design a sustainable grazing management plan, a wildlife habitat restoration plan, or address a specific related issue using a systems approach.
- Demonstrate knowledge of the hydrologic cycle and describe the factors that influence hydrology in arid/semi-arid environments.
- Students will demonstrate understanding of ecological processes responsible for ecosystem function in arid/semi-arid environments.

Departmental requirements may be utilized to satisfy baccalaureate core and non-departmental minor requirements.

Code	Title	Credits
Baccalaureate Core <sup>1</sup>		
Select 51 credits		51
Skills Courses		

Fitness		
HHS 231	*LIFETIME FITNESS FOR HEALTH	
HHS 241	*LIFETIME FITNESS (or PAC course)	
Mathematics		
Met with Rangelan	d Sciences General Sciences, Math and Statistics	
Speech		
COMM 111	*PUBLIC SPEAKING	
or COMM 114		
or COMM 218	*INTERPERSONAL COMMUNICATION	
Writing I	#ENOLIGIL COMPOSITION (Massaches Ashara in face)	
WR 121	*ENGLISH COMPOSITION (Must be taken in first 45 credits)	
Writing II	o.cuito,	
WR 327	*TECHNICAL WRITING	
Perspective Courses <sup>2</sup>		
Biological Science (I	Lecture/Lab)	
Cultural Diversity (C		
Literature and the A	rts (LA)	
Physical Science (Le	ecture/Lab or Lab)	
Social Processes an	d Institutions (SPI)	
Western Culture (WC	c)	
Difference, Power, ar	nd Discrimination Courses (DPD)	
Synthesis Courses <sup>4</sup>		
Contemporary Globa	al Issues (CGI)	
Science, Technology	, and Society (STS)	
Writing Intensive Co	urse (WIC)	
Select one course f	rom the following:	
AG 421	*WRITING IN AGRICULTURE	
ANS 420	^ETHICAL ISSUES IN ANIMAL AGRICULTURE	
ENSC 479	^ENVIRONMENTAL CASE STUDIES	
FW 435	^WILDLIFE IN AGRICULTURAL ECOSYSTEMS	
Rangeland Science Bas		
Fundamentals of Range		
RNG 121 RNG 341	*INTRODUCTION TO WILDLAND ECOLOGY  RANGELAND ECOLOGY AND MANAGEMENT	3
RNG 351	RANGE ECOLOGY AND MANAGEMENT RANGE ECOLOGY I-GRASSLANDS	3
RNG 352	RANGE ECOLOGY II-SHRUBLANDS	3
Methods and Manageme		3
RNG 421	WILDLAND RESTORATION AND ECOLOGY	4
RNG 441	RANGELAND ANALYSIS	4
RNG 442	RANGELAND-ANIMAL RELATIONS	4
RNG 490	RANGELAND MANAGEMENT PLANNING	4
Plants		
BOT 331	PLANT PHYSIOLOGY	4
BOT 341	PLANT ECOLOGY	4
RNG 353	WILDLAND PLANT IDENTIFICATION	4
Soil		
Select one of the follow	ving options:	4
SOIL 205	SOIL SCIENCE	
& SOIL 206	and *SOIL SCIENCE LABORATORY FOR SOIL 205	
CSS 205	*SOIL SCIENCE	
Select one course from	•	
SOIL 366	ECOSYSTEMS OF WILDLAND SOILS	
SOIL 466	SOIL MORPHOLOGY AND CLASSIFICATION	
Water	DECEDT WATERCHED MANAGEMENT	
RNG 355	DESERT WATERSHED MANAGEMENT RIPARIAN ECOHYDROLOGY AND MANAGEMENT	4
RNG 455 Socio-Economic	NIFANIAN ECONTURULUGT AND MANAGEMENT	4
Select one course from	a the following:	3
AEC 351	*NATURAL RESOURCE ECONOMICS AND POLICY	3
	2 *ENVIRONMENTAL ECONOMICS AND POLICY	
Select one course from		4
	3	·

FORMULATION  Select one course from the following:  ANS 436 SHEEP PRODUCTION SYSTEMS  ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS  & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I  & BI 205 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15  & CH 122 and *GENERAL CHEMISTRY  & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  Or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor			
SOC 475 RURAL SOCIOLOGY SOC 480 ENVIRONMENTAL SOCIOLOGY SOC 481 *SOCIETY AND NATURAL RESOURCES  Animals  ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION Select one course from the following: ANS 436 SHEEP PRODUCTION SYSTEMS ANS 445 BEEF PRODUCTION SYSTEMS ANS 446 GRAZING LIVESTOCK PRODUCTION ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE 448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY II & BI 205 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	ANTH 466	*RURAL ANTHROPOLOGY	
SOC 480 ENVIRONMENTAL SOCIOLOGY SOC 481 *SOCIETY AND NATURAL RESOURCES  Animals  ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION PORMULATION  Select one course from the following: ANS 436 SHEEP PRODUCTION SYSTEMS ANS 445 BEEF PRODUCTION SYSTEMS ANS 446 GRAZING LIVESTOCK PRODUCTION ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY II & BI 205 and *INTRODUCTORY BIOLOGY III  & BI 205 and *INTRODUCTORY BIOLOGY III  & CH 121 GENERAL CHEMISTRY & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 44 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	SOC 381	SOCIAL DIMENSIONS OF SUSTAINABILITY	
SOC 481 *SOCIETY AND NATURAL RESOURCES  Animals  ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION  Select one course from the following:  ANS 436 SHEEP PRODUCTION SYSTEMS  ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY II & BI 205 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	SOC 475	RURAL SOCIOLOGY	
Animals  ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION  Select one course from the following:  ANS 436 SHEEP PRODUCTION SYSTEMS  ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY: II & BI 205 and *INTRODUCTORY BIOLOGY: III  CH 121 GENERAL CHEMISTRY 15  & CH 122 and *GENERAL CHEMISTRY 15  & CH 123 and *GENERAL CHEMISTRY 15  & CH 124 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	SOC 480	ENVIRONMENTAL SOCIOLOGY	
ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION  Select one course from the following:  ANS 436 SHEEP PRODUCTION SYSTEMS ANS 445 BEEF PRODUCTION SYSTEMS ANS 446 GRAZING LIVESTOCK PRODUCTION ANS 448/CROP 448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3 RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12 Series 1 BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2 BI 204 *INTRODUCTORY BIOLOGY III & BI 205 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4 ST 201 PRINCIPLES OF STATISTICS OF ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	SOC 481	*SOCIETY AND NATURAL RESOURCES	
FORMULATION  Select one course from the following:  ANS 436 SHEEP PRODUCTION SYSTEMS  ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS  & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I  & BI 205 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  **CH 124 **CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	Animals		
ANS 436 SHEEP PRODUCTION SYSTEMS  ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP 448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY II & BI 205 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  Or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	ANS 313		0,4
ANS 445 BEEF PRODUCTION SYSTEMS  ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP 448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3 RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3 General Science, Math and Statistics  Select one of the following biology series:  12 Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY II & BI 205 and *INTRODUCTORY BIOLOGY III & BI 206 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY CH 122 and *GENERAL CHEMISTRY SCH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE  4 ST 201 PRINCIPLES OF STATISTICS Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice  27-32	Select one course from	n the following:	
ANS 446 GRAZING LIVESTOCK PRODUCTION  ANS 448/CROP LIVESTOCK PRODUCTION ON PASTURE  448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	ANS 436	SHEEP PRODUCTION SYSTEMS	
ANS 448/CROP 448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY III  & BI 205 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15  & CH 122 and *GENERAL CHEMISTRY 15  & CH 123 and *GENERAL CHEMISTRY 15  TOTAL OF AN ANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	ANS 445	BEEF PRODUCTION SYSTEMS	
448/RNG 448  Other Animals  FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3  RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY III & BI 206 and *INTRODUCTORY BIOLOGY III & BI 206 and *INTRODUCTORY BIOLOGY III & BI 206 and *GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY 15 & CH 123 and *GENERAL CHEMISTRY AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	ANS 446	GRAZING LIVESTOCK PRODUCTION	
FW 255 FIELD SAMPLING OF FISH AND WILDLIFE 3 RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3 General Science, Math and Statistics  Select one of the following biology series: 12 Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY III CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY 15 & CH 123 and *GENERAL CHEMISTRY MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4 ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32		LIVESTOCK PRODUCTION ON PASTURE	
RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3  General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4 ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	Other Animals		
General Science, Math and Statistics  Select one of the following biology series: 12  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4 ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	FW 255	FIELD SAMPLING OF FISH AND WILDLIFE	3
Select one of the following biology series:  Series 1  BI 221 *PRINCIPLES OF BIOLOGY: CELLS & BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY WITH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	RNG 457	HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT	3
Series 1	General Science, Math	and Statistics	
BI 221	Select one of the follow	wing biology series:	12
& BI 222 and *PRINCIPLES OF BIOLOGY: ORGANISMS & BI 223 and *PRINCIPLES OF BIOLOGY: POPULATIONS  Series 2  BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY 15 & CH 123 and *GENERAL CHEMISTRY WITH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	Series 1		
BI 204 *INTRODUCTORY BIOLOGY I & BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	& BI 222	and *PRINCIPLES OF BIOLOGY: ORGANISMS	
& BI 205 and *INTRODUCTORY BIOLOGY II & BI 206 and *INTRODUCTORY BIOLOGY III  CH 121 GENERAL CHEMISTRY 15 & CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	Series 2		
& CH 122 and *GENERAL CHEMISTRY & CH 123 and *GENERAL CHEMISTRY  MTH 241 *CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE 4  ST 201 PRINCIPLES OF STATISTICS 4  or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	& BI 205	and *INTRODUCTORY BIOLOGY II	
ST 201 PRINCIPLES OF STATISTICS 4 or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	& CH 122	and *GENERAL CHEMISTRY	15
or ST 351 INTRODUCTION TO STATISTICAL METHODS  Option or Minor  Select one of four Rangeland Sciences options or a minor of your choice 27-32	MTH 241	*CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE	4
Option or Minor           Select one of four Rangeland Sciences options or a minor of your choice         27-32	ST 201	PRINCIPLES OF STATISTICS	4
Select one of four Rangeland Sciences options or a minor of your choice 27-32	or ST 351	INTRODUCTION TO STATISTICAL METHODS	
·	Option or Minor		
Total credits required for graduation is 180	Select one of four Ran	geland Sciences options or a minor of your choice	27-32
	Total credits required to	for graduation is 180	

- Baccalaureate Core Course (BCC)
- ^ Writing Intensive Course (WIC)
- Certain classes may be used to satisfy both the baccalaureate core and the rangeland ecology and management core
- No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core
- Please reference the baccalaureate core course catalog (http://catalog.oregonstate.edu/earning-degrees/bcc/) for a list of approved courses
- The two courses used to fulfill the Synthesis requirement may not be in the same department

Major Code: 292

## **Sample On-Campus 4 Year Plan**

First Year		
Fall		Credits
WR 121	*ENGLISH COMPOSITION	3
CH 121	GENERAL CHEMISTRY	5
HHS 231 or HHS 241	*LIFETIME FITNESS FOR HEALTH or *LIFETIME FITNESS	2
RNG 121	*INTRODUCTION TO WILDLAND ECOLOGY	4
	Credits	14

	nter	ADUDUO ODEANINO (D	0
CO	MM 111 or COMM 114 or COMM 218	*PUBLIC SPEAKING (Bacc Core) or *ARGUMENT AND CRITICAL DISCOURSE or *INTERPERSONAL COMMUNICATION	3
СН	122	*GENERAL CHEMISTRY	5
MT	H 111	*COLLEGE ALGEBRA	4
Ba	cc Core: Lit. & Arts		3
		Credits	15
Sp	ring		
Ba	cc Core: Western Cul	t ure	3
AE	C 250	*INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY (Bacc Core SPI)	3
СН	123	*GENERAL CHEMISTRY	5
	IL 205	SOIL SCIENCE	4
& S	SOIL 206	and *SOIL SCIENCE LABORATORY FOR SOIL 205	
Se Fal	cond Year	Credits	15
BI :	221	*PRINCIPLES OF BIOLOGY: CELLS	4
Ba	cc Core: Cultural Dive	ersity	3
MT	H 241	*CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE	4
	G 341	RANGELAND ECOLOGY AND MANAGEMENT	3
Ele	ctive/Option/Minor		2
		Credits	16
	nter	*PRINCIPLEO OF PIOLOGY OR ANIIOMO	
	222	*PRINCIPLES OF BIOLOGY: ORGANISMS	4
	T 331	*TECHNICAL WRITING (Bacc Core) PLANT PHYSIOLOGY	3
	201	PRINCIPLES OF STATISTICS	4
31	or ST 351	or INTRODUCTION TO STATISTICAL METHODS	4
		Credits	15
Sp	ring		
BI:	223	*PRINCIPLES OF BIOLOGY: POPULATIONS	4
Ba	cc Core DPD		3
во	T 341	PLANT ECOLOGY	4
RN	G 353	WILDLAND PLANT IDENTIFICATION	4
		Credits	15
Thi Fal	rd Year I		
ΑN	S 445	BEEF PRODUCTION SYSTEMS	4
AE	C 351	*NATURAL RESOURCE ECONOMICS AND POLICY (Bacc Core Global)	3
FW	251	PRINCIPLES OF FISH AND WILDLIFE CONSERVATION	3
RN	G 441	RANGELAND ANALYSIS	4
Wiı	nter	Credits	14
ΑN	TH 466	*RURAL ANTHROPOLOGY	4
RN	G 352	RANGE ECOLOGY II-SHRUBLANDS	3
RN	G 442	RANGELAND-ANIMAL RELATIONS	4
	IL 366	ECOSYSTEMS OF WILDLAND SOILS	3
Ele	ctive/Option/Minor		2
Spi	ring	Credits	16
AN	S 313	APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION	4
Ba	cc Core STS		4
RN	G 351	RANGE ECOLOGY I-GRASSLANDS	3
RN	G 355	DESERT WATERSHED MANAGEMENT	4
Foi Fal	urth Year	Credits	15
	G 421	WILDLAND RESTORATION AND ECOLOGY	4
	G 455	RIPARIAN ECOHYDROLOGY AND MANAGEMENT	4
1			-

RNG 457	HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT	3
Elective/Option/Minor		4
	Credits	15
Winter		
AG 421	^WRITING IN AGRICULTURE	3
or ANS 420	or ^ETHICAL ISSUES IN ANIMAL AGRICULTURE	
or FW 435	or *WILDLIFE IN AGRICULTURAL ECOSYSTEMS	
Elective/Option/Minor		12
	Credits	15
Spring		
RNG 490	RANGELAND MANAGEMENT PLANNING	4
Elective/Option/Minor		11
	Credits	15
	Total Credits	180

# **Sample Online 4 Year Plan**

First Year		
Fall		Credits
WR 121	*ENGLISH COMPOSITION	3
CH 121	GENERAL CHEMISTRY	5
HHS 231 or HHS 241	*LIFETIME FITNESS FOR HEALTH or *LIFETIME FITNESS	2
RNG 121	*INTRODUCTION TO WILDLAND ECOLOGY	4
	Credits	14
Winter		
COMM 111 or COMM 114 or COMM 218	*PUBLIC SPEAKING (Bacc Core) or *ARGUMENT AND CRITICAL DISCOURSE or *INTERPERSONAL COMMUNICATION	3
CH 122	*GENERAL CHEMISTRY	5
MTH 111	*COLLEGE ALGEBRA	4
Bacc Core: Lit. & Arts		3
	Credits	15
Spring		
Bacc Core: Western Cul	Iture	3
AEC 250	*INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY (Bacc Core SPI)	3
CH 123	*GENERAL CHEMISTRY	5
CSS 205	*SOIL SCIENCE	4
	Credits	15
Second Vear		

	Credits	15
Second Year		
Fall		
BI 204	*INTRODUCTORY BIOLOGY I	4
Bacc Core: Cultural	Diversity	3
MTH 241	*CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCE	4
RNG 341	RANGELAND ECOLOGY AND MANAGEMENT	3
Elective/Option/Min	nor	2
	Credits	16
Winter		
BI 205	*INTRODUCTORY BIOLOGY II	4
WR 327	*TECHNICAL WRITING (Bacc Core)	3
BOT 331	PLANT PHYSIOLOGY	4
ST 201 or ST 351	PRINCIPLES OF STATISTICS or INTRODUCTION TO STATISTICAL METHODS	4
	Credits	15
Spring		
BI 206	*INTRODUCTORY BIOLOGY III	4
Bacc Core DPD		3
BOT 341	PLANT ECOLOGY	4
RNG 353	WILDLAND PLANT IDENTIFICATION	4
	Credits	15

Fall         ANTH 466         *RURAL ANTHROPOLOGY         4           AEC 351         *NATURAL RESOURCE ECONOMICS AND POLICY (Bace Core Global)         3           FW 251         PRINCIPLES OF FISH AND WILDLIFE CONSERVATION         3           RNG 441         RANGELAND ANALYSIS         4           Elective/Option/Minor         Credits         18           Winter           ANS 446         GRAZING LIVESTOCK PRODUCTION         4           RNG 352         RANGE ECOLOGY II-SHRUBLANDS         3           RNG 442         RANGELAND-ANIMAL RELATIONS         4           Spring           ANS 313         APPLIED ANIMAL NUTRITION: FEEDS AND RATION         4           Spring         APPLIED ANIMAL NUTRITION: FEEDS AND RATION         4           Bacc Core STS         3         3           RNG 351         RANGE ECOLOGY I-GRASSLANDS         3           RNG 355         DESERT WATERSHED MANAGEMENT         4           Fourth Year           Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 425         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3     <	Third Year		
AEC 351 *NATURAL RESOURCE ECONOMICS AND POLICY (Bacc Core Global)  FW 251 PRINCIPLES OF FISH AND WILDLIFE CONSERVATION 3 RNG 441 RANGELAND ANALYSIS 4  Elective/Option/Minor	Fall		
Core Global   PRINCIPLES OF FISH AND WILDLIFE CONSERVATION   3   3   3   3   4   4   4   4   4   4	ANTH 466	*RURAL ANTHROPOLOGY	4
RANG 441   RANGELAND ANALYSIS   4	AEC 351	`	3
Elective/Option/Minor	FW 251	PRINCIPLES OF FISH AND WILDLIFE CONSERVATION	3
Credits         18           Winter         Winter           ANS 446         GRAZING LIVESTOCK PRODUCTION         4           RNG 352         RANGE ECOLOGY II-SHRUBLANDS         3           RNG 442         RANGELAND-ANIMAL RELATIONS         4           SOIL 366         ECOSYSTEMS OF WILDLAND SOILS         3           Credits         14           Spring           ANS 313         APPLIED ANIMAL NUTRITION: FEEDS AND RATION         4           FORMULATION         4           Bacc Core STS         3           RNG 351         RANGE ECOLOGY I-GRASSLANDS         3           RNG 355         DESERT WATERSHED MANAGEMENT         4           Credits         14           Fourth Year           Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 425         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           Credits <td>RNG 441</td> <td>RANGELAND ANALYSIS</td> <td>4</td>	RNG 441	RANGELAND ANALYSIS	4
Winter         ANS 446         GRAZING LIVESTOCK PRODUCTION         4           RNG 352         RANGE ECOLOGY II-SHRUBLANDS         3           RNG 442         RANGELAND-ANIMAL RELATIONS         4           SOIL 366         ECOSYSTEMS OF WILDLAND SOILS         3           Credits         14           Spring           ANS 313         APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION         4           Bacc Core STS         3           RNG 351         RANGE ECOLOGY I-GRASSLANDS         3           RNG 355         DESERT WATERSHED MANAGEMENT         4           Fourth Year         14           Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter         AG 421         "WRITING IN AGRICULTURE or "AWILDLIFE IN AGRICULTURE or "FW 435         3           Elective/Option/Minor         12         Credits         15           Spring         RNG 490         RANGELAND MANAGEMENT PLANNING         4 <tr< td=""><td>Elective/Option/Minor</td><td></td><td>4</td></tr<>	Elective/Option/Minor		4
ANS 446 GRAZING LIVESTOCK PRODUCTION 4 RNG 352 RANGE ECOLOGY II-SHRUBLANDS 3 RNG 442 RANGELAND-ANIMAL RELATIONS 4 SOIL 366 ECOSYSTEMS OF WILDLAND SOILS 3 Credits 14  Spring  ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION 4 FORMULATION 4  Bacc Core STS 3 RNG 351 RANGE ECOLOGY I-GRASSLANDS 3 RNG 355 DESERT WATERSHED MANAGEMENT 4 Credits 14  Fourth Year Fall RNG 421 WILDLAND RESTORATION AND ECOLOGY 4 RNG 455 RIPARIAN ECOHYDROLOGY AND MANAGEMENT 4 RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3 Elective/Option/Minor 4 Credits 15  Winter  AG 421 "WRITING IN AGRICULTURE 0 OF TW 435 OF TWILDLIFE IN AGRICULTURE 0 OF FW 435 OF TWILDLIFE IN AGRICULTURAL ECOSYSTEMS Elective/Option/Minor 12 Credits 15  Spring RNG 490 RANGELAND MANAGEMENT PLANNING 4 Elective/Option/Minor 10 Credits 10		Credits	18
RNG 352   RANGE ECOLOGY II-SHRUBLANDS   3	Winter		
RNG 442   RANGELAND-ANIMAL RELATIONS   4	ANS 446	GRAZING LIVESTOCK PRODUCTION	4
SOIL 366         ECOSYSTEMS OF WILDLAND SOILS         3           Credits         14           Spring         APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION         4           Bacc Core STS         3         RNG 351         RANGE ECOLOGY I-GRASSLANDS         3           RNG 355         DESERT WATERSHED MANAGEMENT         4         4           Credits         14         7         7         4         7         7         8         14         8         7         8         14	RNG 352	RANGE ECOLOGY II-SHRUBLANDS	3
Credits	RNG 442	RANGELAND-ANIMAL RELATIONS	4
Spring           ANS 313         APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION         4           Bacc Core STS         3           RNG 351         RANGE ECOLOGY I-GRASSLANDS         3           RNG 355         DESERT WATERSHED MANAGEMENT         4           Credits         14           Fourth Year           Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter           AG 421         "WRITING IN AGRICULTURE or "ETHICAL ISSUES IN ANIMAL AGRICULTURE or "WILDLIFE IN AGRICULTURAL ECOSYSTEMS         3           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         11	SOIL 366	ECOSYSTEMS OF WILDLAND SOILS	3
ANS 313 APPLIED ANIMAL NUTRITION: FEEDS AND RATION FORMULATION  Bacc Core STS  RNG 351 RANGE ECOLOGY I-GRASSLANDS  RNG 355 DESERT WATERSHED MANAGEMENT  Credits  14  Fourth Year  Fall  RNG 421 WILDLAND RESTORATION AND ECOLOGY 4 RNG 455 RIPARIAN ECOHYDROLOGY AND MANAGEMENT 4 RNG 457 HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT 3 Elective/Option/Minor  Credits  15  Winter  AG 421 "WRITING IN AGRICULTURE or ANS 420 or AETHICAL ISSUES IN ANIMAL AGRICULTURE or FW 435 or AWILDLIFE IN AGRICULTURAL ECOSYSTEMS  Elective/Option/Minor  12  Credits  15  Spring  RNG 490 RANGELAND MANAGEMENT PLANNING  4  Credits 10  Credits 11  Credits 11		Credits	14
FORMULATION	Spring		
RANG 351   RANGE ECOLOGY I-GRASSLANDS   3   3   3   3   5   DESERT WATERSHED MANAGEMENT   4   4   4   4   4   4   5   5   5   6   5   5   6   5   5   6   5   5	ANS 313		4
RNG 355   DESERT WATERSHED MANAGEMENT   4	Bacc Core STS		3
Credits	RNG 351	RANGE ECOLOGY I-GRASSLANDS	3
Fourth Year           Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter           AG 421         "WRITING IN AGRICULTURE or "ANS 420 or "ETHICAL ISSUES IN ANIMAL AGRICULTURE or "WILDLIFE IN AGRICULTURAL ECOSYSTEMS         3           Elective/Option/Minor         12           Credits         15           Spring         RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	RNG 355	DESERT WATERSHED MANAGEMENT	4
Fall           RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter           AG 421         "WRITING IN AGRICULTURE or "AITION AGRICULTURE or "WILDLIFE IN AGRICULTURE OR "AUTION AGRICULTURE OR "AUTION AGRICULTURAL ECOSYSTEMS           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14		Credits	14
RNG 421         WILDLAND RESTORATION AND ECOLOGY         4           RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter           AG 421         "WRITING IN AGRICULTURE or "ETHICAL ISSUES IN ANIMAL AGRICULTURE or "WILDLIFE IN AGRICULTURE ECOSYSTEMS         3           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	Fourth Year		
RNG 455         RIPARIAN ECOHYDROLOGY AND MANAGEMENT         4           RNG 457         HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT         3           Elective/Option/Minor         4           Credits         15           Winter           AG 421         "WRITING IN AGRICULTURE or "ETHICAL ISSUES IN ANIMAL AGRICULTURE or "WILDLIFE IN AGRICULTURAL ECOSYSTEMS           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	Fall		
RNG 457	RNG 421	WILDLAND RESTORATION AND ECOLOGY	4
Elective/Option/Minor	RNG 455	RIPARIAN ECOHYDROLOGY AND MANAGEMENT	4
Credits   15	RNG 457	HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT	3
Winter           AG 421         "WRITING IN AGRICULTURE or ANS 420 or "ETHICAL ISSUES IN ANIMAL AGRICULTURE or FW 435 or "WILDLIFE IN AGRICULTURAL ECOSYSTEMS"         12           Elective/Option/Minor         12           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	Elective/Option/Minor		4
AG 421		Credits	15
or ANS 420 or ^ETHICAL ISSUES IN ANIMAL AGRICULTURE or FW 435         or ^WILDLIFE IN AGRICULTURAL ECOSYSTEMS           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	Winter		
or FW 435         or "WILDLIFE IN AGRICULTURAL ECOSYSTEMS           Elective/Option/Minor         12           Credits         15           Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	AG 421	*WRITING IN AGRICULTURE	3
Elective/Option/Minor         12           Credits         15           Spring         RANG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14			
Credits   15		or ^WILDLIFE IN AGRICULTURAL ECOSYSTEMS	
Spring           RNG 490         RANGELAND MANAGEMENT PLANNING         4           Elective/Option/Minor         10           Credits         14	Elective/Option/Minor		
Elective/Option/Minor 10 Credits 14	Spring	Credits	15
Credits 14	RNG 490	RANGELAND MANAGEMENT PLANNING	4
Credits 14	Elective/Option/Minor		10
Total Credits 180	· · · · · · · · · · · · · · · · · · ·	Credits	14