

RANGELAND ECOLOGY AND MANAGEMENT - BS, RANCH MANAGEMENT OPTION

Program Requirements

First Year

Fall		Semester Credit Hours
AGEC 105	Introduction to Agricultural Economics	3
ESSM 201	Exploring Ecosystem Science and Management	1
RENr 205 & RENr 215	Fundamentals of Ecology and Fundamentals of Ecology–Laboratory	4
Select one of the following:		4
BIOL 101	Botany	
BIOL 113	Essentials in Biology	
HORT 201 & HORT 202	Horticultural Science and Practices and Horticultural Science and Practices Laboratory	
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ¹		3
Semester Credit Hours		15

Spring

ANSC 107 & ANSC 108	General Animal Science and General Animal Science Laboratory	4
CHEM 119	Fundamentals of Chemistry I	4
ESSM 281	Seminar in Ecosystem Science and Management	1
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ¹		3
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) ¹		3
Semester Credit Hours		15

Second Year

Fall		Semester Credit Hours
ESSM 302	Wildland Plants of North America	3
ESSM 314	Principles of Rangeland Management Around the World	3
ESSM 351/ RENr 405 or RENr 405/ ESSM 351	Geographic Information Systems for Resource Management or Geographic Information Systems for Resource Management	3
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) ¹		3
Mathematics (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics)		3
Semester Credit Hours		15

Spring

ANSC 320	Animal Nutrition and Feeding	3
ESSM 301	Wildland Watershed Management	3
ESSM 313	Vegetation Sampling Methods and Designs in Ecosystems	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ^{1,2}		3
Mathematics (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics)		3

Semester Credit Hours

15

Summer

American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ¹		3
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Semester Credit Hours

3

Third Year

Fall

ANSC 302	Basic Beef Cattle Production	3
AGEC 325	Principles of Farm and Ranch Management	3
ESSM 315	Rangeland Inventory and Monitoring	1
ESSM 316	Range Ecology	3
SCSC 301	Soil Science	4

Semester Credit Hours

14

Spring

ESSM 303 or ESSM 304	Agrostology or Rangeland Plant Taxonomy	3
ESSM 306 or ESSM 311	Plant Functional Ecology and Adaptation or Biogeochemistry and Global Change	3
ESSM 317	Vegetation Management	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) ^{1,2}		3
Emphasis area elective ³		3

Semester Credit Hours

15

Fourth Year

Fall

ESSM 415 or RENr 410	Range Analysis and Management Planning or Ecosystem Management	4
ESSM 481	Senior Seminar	1
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) ¹		3
Emphasis area elective ³		3
Emphasis area elective ³		3

Semester Credit Hours

14

Spring

Select one of the following:		3
AGEC 350	Environmental and Natural Resource Economics	
ESSM 318	Coupled Social and Ecological Systems	
ESSM 404	Changing Natural Resource Policy	
ESSM 406	Natural Resources Policy	

Emphasis area elective ³	3
Emphasis area elective ³	3
General elective	3
General elective	2
Semester Credit Hours	14
Total Semester Credit Hours	120

¹ Graduation requirements include a requirement for 3 hours of International and Cultural Diversity (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/>) courses and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/>) courses. A course satisfying a Core category, a college/department requirement, or a free elective can be used to satisfy this requirement. Select in consultation with an academic advisor.

² Credit by examination may be used to substitute 3 hours of POLS 206 or POLS 207.

³ To be selected from an approved list in consultation with an academic advisor.