# NATURAL RESOURCE ECOLOGY & MANAGEMENT: RANGELAND ECOLOGY & MANAGEMENT, BSAG

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/#matriculation](http://catalog.okstate.edu/university-academic-regulations/#matriculation)).

Minimum Overall Grade Point Average: 2.00
Total Hours: 125

## Code | Title | Hours
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**General Education Requirements**

### English Composition

ENGL 1113 Composition I 3
or ENGL 1313 Critical Analysis and Writing I 3

Select one of the following:

ENGL 1213 Composition II 3
ENGL 1413 Critical Analysis and Writing II 3
ENGL 3323 Technical Writing 3

### American History & Government

Select one of the following:

HIST 1103 Survey of American History 3
HIST 1483 American History to 1865 (H) 3
HIST 1493 American History Since 1865 (DH) 3

POLS 1113 American Government 3

### Analytical & Quantitative Thought (A)

MATH 1513 College Algebra (A) 3
or MATH 1314 College Algebra (A) 3

STAT 2013 Elementary Statistics (A) 3

### Humanities (H)

Courses designated (H) 6

### Natural Sciences (N)

Must include one Laboratory Science (L) course

BIOL 1114 Introductory Biology (LN) 4

Course designated (N) 3

### Social & Behavioral Sciences (S)

AGEC 1113 Introduction to Agricultural Economics (S) 3

### Additional General Education

Courses designated (A), (H), (N), or (S) 6

## Hours Subtotal 40

### Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan
Select at least one Diversity (D) course
Select at least one International Dimension (I) course

## College/Departmental Requirements

### Agricultural Sciences and Natural Resources

AG 1011 First Year Seminar 1

NREM 1012 Introduction to Natural Resource Ecology and Management 2

SOIL 2124 Fundamentals of Soil Science (N) 4

### Natural Sciences

Biol 1604 Animal Biology 4

CHEM 1215 Chemical Principles I (LN) 4

CHEM 1225 Chemical Principles II (LN) 5

PBIO 1404 Plant Biology (LN) 4

### Written and Oral Communications

Select one of the following:

AGCM 3103 Written Communications in Agricultural Sciences and Natural Resources 3

BCOM 3113 Written Communication 3

ENGL 3323 Technical Writing 3

Select one of the following:

AGCM 3203 Oral Communications in Agricultural Sciences & Natural Resources (S) 4

SPCH 2713 Introduction to Speech Communication (S) 4

SPCH 3733 Elements of Persuasion (S) 4

## Hours Subtotal 30

### Major Requirements

#### Core Courses

ANSI 3543 Principles of Animal Nutrition 3

NREM 2083 Geospatial Technologies for Natural Resources 3

NREM 3012 Applied Ecology Laboratory 2

NREM 3013 Applied Ecology and Conservation 3

NREM 3063 Natural Resource Biometrics 3

NREM 3503 Principles of Wildlife Ecology and Management 3

NREM 3613 Principles of Rangeland Management 3

NREM 4001 Issues In Global Change 1

NREM 4023 Restoration Ecology 3

NREM 4033 Ecology Of Invasive Species 3

NREM 4043 Natural Resource Administration and Policy 3

NREM 4443 Watershed Hydrology and Water Quality 3

NREM 4603 Rangeland and Pasture Utilization 3

NREM 4613 Rangeland Resources Planning 3

NREM 4783 Prescribed Fire 3

PBIO 4005 Field Botany 5

SOIL 3433 Soil Genesis, Morphology, and Classification 3

### Related Courses

Select 5 hours of the following or of other courses in consultation with a faculty advisor for additional breadth, or to create a specialty emphasis area:

AGEC 3423 Farm and Agribusiness Management

AGEC 3503 Natural Resource Economics

ANSI 1124 Introduction to the Animal Sciences

ANSI 3433 Animal Breeding
ANSI 3653  Applied Animal Nutrition  
ANSI 4613  Beef Cow-Calf Management  
BIOL 3034  General Ecology  
BIOL 3513  Principles of Conservation Biology  
BIOL 4113  Conservation Genetics  
BIOL 4133  Evolution  
BIOL 4174  Mammalogy  
BIOL 4303  Organismal Ecotoxicology  
BIOL 4413  Biology of Fishes  
ENTO 2993  Introduction to Entomology (LN)  
ENTO 3331  Insect Pests of Agronomic Crops  
ENTO 4223  Ecological Methodology  
ENVR 1113  Elements of Environmental Science  
ENVR 4512  Environmental Impact Analysis  
GEOG 3023  Climatology (N)  
GEOG 3033  Meteorology (N)  
GEOG 3153  Conservation of Natural Resources (S)  
GEOG 3333  Spatial Analysis (A)  
GEOG 4053  Biogeography  
GEOG 4333  Remote Sensing  
GEOG 4343  Geographic Information Systems: Resource Management Applications  
GEOL 3503  Environmental Geology (N)  
NREM 2013  Ecology of Natural Resources  
NREM 2134  Dendrology  
NREM 3101  Forest Resource Field Studies  
NREM 3111  Natural Resource Field Studies  
NREM 3143  Forest Biology  
NREM 3153  Forest Health and Disturbance Ecology  
NREM 3224  Silviculture  
NREM 3502  Wildlife Law Enforcement  
NREM 4053  Natural Resource Recreation  
NREM 4093  Natural Resources, People and Sustainable Development (I)  
NREM 4403  Wetland Ecology and Management  
NREM 4452  Pond Management  
NREM 4453  Aquaculture  
NREM 4464  Ornithology  
NREM 4524  Wildlife Management Techniques  
NREM 4533  Wildlife Management for Game Species  
NREM 4543  Wildlife Management for Biodiversity  
NREM 4603  Rangeland and Pasture Utilization  
NREM 4793  Advanced Prescribed Fire  
NREM 4960  Undergraduate Internship  
NREM 4980  Undergraduate Research  
NREM 4990  Special Topics in Natural Resource Ecology and Management  
PBIO 3024  Plant Diversity  
PBIO 3114  Plant Taxonomy  
PBIO 4463  Plant Physiology  
PLP 3343  Principles of Plant Pathology  
PLNT 1213  Introduction to Plant and Soil Systems  
POLS 4593  Natural Resources and Environmental Policy  
SOIL 3433  Soil Genesis, Morphology, and Classification  
SOIL 4463  Soil and Water Conservation  
SOIL 4483  Soil Microbiology  
SOIL 4683  Soil, Water, and Weather  

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<tr>
<th>Hours Subtotal</th>
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<tbody>
<tr>
<td>Electives</td>
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<tr>
<td>Total Hours</td>
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1. College & Departmental requirements that may be used to meet GE requirements.
2. If used as (N) course above, then hours are reduced by course hours.
3. If ENGL 3323 Technical Writing is used to satisfy ENGL 1213 Composition II above; hours in this block are reduced by 3.
4. If used as (S) course above, then hours are reduced by three.
5. May not use a course used above in Core Courses.

Other Requirements

- Students must earn minimum grades of “C” or “P” in each course listed in Major Requirements.
- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2025.