RANGELAND SCIENCES UNDERGRADUATE MAJOR (BS, HBS)

This major offers the following option(s):

- Habitat Management (http://catalog.oregonstate.edu/college-departments/agricultural-sciences/animal-rangeland-sciences/rangeland-sciences-bs-hbs/habitat-management-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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
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Skills Courses
Rangeland Sciences Undergraduate Major (BS, HBS)

Sample On-Campus 4 Year Plan

First Year
Fall

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>WR 121</td>
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<tr>
<td>CH 121</td>
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</tr>
<tr>
<td>HHS 231</td>
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<tr>
<td>or HHS 241</td>
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<tr>
<td>RNG 121</td>
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Winter

<table>
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<tbody>
<tr>
<td>COMM 111</td>
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<tr>
<td>or COMM 114</td>
<td>3</td>
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<tr>
<td>or COMM 218</td>
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<tr>
<td>or COMM 218</td>
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<td>CH 122</td>
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<td>MTH 111</td>
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<td>Bacc Core: Lit. &amp; Arts</td>
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Second Year
Fall

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<tr>
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<tbody>
<tr>
<td>BI 221</td>
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<tr>
<td>Bacc Core: Cultural Diversity</td>
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<td>MTH 241</td>
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<td>RNG 341</td>
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<td>Elective/Option/Minor</td>
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Winter

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<td>AEC 250</td>
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<td>CH 123</td>
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<td>RANGELAND ANALYSIS</td>
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Third Year
Fall

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<td>ANS 445</td>
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<td>AEC 351</td>
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<td>FW 251</td>
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<td>RNG 441</td>
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Winter

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<tbody>
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<td>ANTH 466</td>
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<tr>
<td>RANGELAND ECOLOGY AND MANAGEMENT</td>
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<tr>
<td>RANGELAND-ANIMAL RELATIONS</td>
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Fourth Year
Fall

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<th>Course</th>
<th>Credits</th>
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<tr>
<td>RNG 455</td>
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Total credits required for graduation is 180

* Baccalaureate Core Course (BCC)
* Writing Intensive Course (WIC)
1 Certain classes may be used to satisfy both the baccalaureate core and the rangeland ecology and management core
2 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
3 Please reference the baccalaureate core course catalog (http://catalog.oregonstate.edu/earning-degrees/bcc/) for a list of approved courses
4 The two courses used to fulfill the Synthesis requirement may not be in the same department

Major Code: 292
Rangeland Sciences Undergraduate Major (BS, HBS)

RNG 457  HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT  3
Elective/Option/Minor 4

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

Third Year

Fall
ANTH 466  *RURAL ANTHROPOLOGY  4
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 12
Credits 18

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

Fourth Year

Fall
RNG 421  WILDLAND RESTORATION AND ECOLOGY  4
RNG 455  RIPARIAN ECOCYDROWLOGY AND MANAGEMENT  4
RNG 457  HABITAT ANALYSIS 1: HABITAT USE AND MOVEMENT  3

Elective/Option/Minor 10
Credits 14

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 18

Spring
RNG 490  RANGELAND MANAGEMENT PLANNING  4

Elective/Option/Minor 10
Credits 14

Total Credits 180

Sample Online 4 Year Plan

First Year

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

Credits 15

Winter
COMM 111  or COMM 114  or COMM 218  3
or *PUBLIC SPEAKING (Bacc Core)
CH 122  *GENERAL CHEMISTRY  5
MTH 111  *COLLEGE ALGEBRA  4

Bacc Core: Lit. & Arts 3

Credits 15

Spring
Bacc Core: Western Culture 3

AEC 250  INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY (Bacc Core SPI)  3
CH 123  *GENERAL CHEMISTRY  5
CSS 205  *SOIL SCIENCE  4

Credits 14

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/Minor 2

Credits 16

Winter
BI 205  INTRODUCTORY BIOLOGY II  4
WR 237  *TECHNICAL WRITING (Bacc Core)  3
BOT 331  PLANT PHYSIOLOGY  4
ST 201  PRINCIPLES OF STATISTICS  4
or ST 351  or INTRODUCTION TO STATISTICAL METHODS

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