APPLIED ECOLOGY OPTION

This option is offered within the following major(s):

• Environmental Sciences - College of Earth, Ocean, and Atmospheric Sciences (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/environmental-sciences-bs-hbs)

Also available via Ecampus (http://ecampus.oregonstate.edu).

The Applied Ecology option is for Environmental Sciences students who seek to orient their studies around ecology. This is applied ecology and therefore includes geographic methods for measuring and data collection in ecological change. Students seeking a concentration in policy and management are encouraged to consider the Conservation, Resources, and Sustainability option.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BI 370</td>
<td>ECOLOGY</td>
<td>3</td>
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</tbody>
</table>

**Applied Ecology Core**

**Ecological Studies**

Select a minimum of one of the following: 3-4

- BOT 341 PLANT ECOLOGY
- FES 341 FOREST ECOLOGY
- FW 479 WETLANDS AND RIPARIAN ECOLOGY
- RNG 341 RANGELAND ECOLOGY AND MANAGEMENT

**Field Methods**

Select a minimum of one of the following: 3-4

- BI 371 *ECOLOGICAL METHODS
- BOT 440 FIELD METHODS IN PLANT ECOLOGY
- RNG 353 WILDLAND PLANT IDENTIFICATION

**Geographic Methods**

Select one to three of the following: 4-12

- GEOG 201 *FOUNDATIONS OF GEOSPATIAL SCIENCE AND GIS
- GEOG 360 GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY
- GEOG 370 GEOVISUALIZATION: CARTOGRAPHY
- GEOG 480 REMOTE SENSING I: PRINCIPLES AND APPLICATIONS

**Electives**

Select 9-17 credits of the following: 9-17

- BI 311 GENETICS
  or PBG 430 PLANT GENETICS
- BI 345 *INTRODUCTION TO EVOLUTION
  or BI 445 EVOLUTION
- BI 351 MARINE ECOLOGY
- BI 481 BIOGEOGRAPHY
- BOT 313 PLANT STRUCTURE
- BOT 321 PLANT SYSTEMATICS
- BOT 331 PLANT PHYSIOLOGY
- FES 342 FOREST TYPES OF THE NORTHWEST
- FES 350 URBAN FORESTRY
  or HORT 350 URBAN FORESTRY

- FES 445 ECOLOGICAL RESTORATION
  or FW 445 ECOLOGICAL RESTORATION
- FOR 346 TOPICS IN WILDLAND FIRE
- FW 311 ORNITHOLOGY
- FW 312 SYSTEMATICS OF BIRDS
- FW 315 ICHTHYOLOGY
- FW 317 MAMMALOGY
- FW 320 INTRODUCTORY POPULATION DYNAMICS
- FW 321 APPLIED COMMUNITY AND ECOSYSTEM ECOLOGY
- FW 427 PRINCIPLES OF WILDLIFE DISEASES
- FW 434 ESTUARINE ECOLOGY
  or OC 434 ESTUARINE ECOLOGY
- FW 451 AVIAN CONSERVATION AND MANAGEMENT
- FW 456 FRESHWATER ECOLOGY AND CONSERVATION
- FW 462 ECOSYSTEM SERVICES
- FW 470 *ECOLOGY AND HISTORY: LANDSCAPES OF THE COLUMBIA BASIN
- FW 473 FISH ECOLOGY
- FW 481 WILDLIFE ECOLOGY
- GEOG 324 GEOGRAPHY OF LIFE: SPECIES DISTRIBUTIONS AND CONSERVATION
- HORT 318 *APPLIED ECOLOGY OF MANAGED ECOSYSTEMS
- RNG 351 RANGE ECOLOGY I-GRASSLANDS
- RNG 352 RANGE ECOLOGY II-SHRUBLANDS
- RNG 355 DESERT WATERSHED MANAGEMENT
- RNG 421 WILDLAND RESTORATION AND ECOLOGY
- RNG 441 RANGELAND ANALYSIS
- RNG 442 RANGELAND-ANIMAL RELATIONS
- RNG 455 RIPARIAN ECOHYDROLOGY AND MANAGEMENT
- SOIL 366 ECOSYSTEMS OF WILDLAND SOILS
- SOIL 455 BIOLOGY OF SOIL ECOSYSTEMS
- Z 350 ANIMAL BEHAVIOR
- Z 365 BIOLOGY OF INSECTS
- Z 423 ENVIRONMENTAL PHYSIOLOGY
- Z 477 AQUATIC ENTOMOLOGY

**Total Hours** 22-40

* Baccalaureate Core Course (BCC)
^ Writing Intensive Course (WIC)

**Option Code**: 845