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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**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  MAMMALOLOGY

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