

# PRE-EDUCATION BIOLOGY OPTION

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

- Biology - College of Science (<http://catalog.oregonstate.edu/college-departments/science/school-life-sciences/integrative-biology/biology-bs-hbs/>)

The Biology major Pre-Education option is designed to complete the requirements for the Science Education option in the OSU Education master's degree and other U.S. graduate licensure programs for secondary education. Students should consult the requirements for specific schools before they apply because requirements can change and vary some between institutions. The option couples the strong background of the Biology major with core science education and science electives, as well as a required practicum experience. Students receive specific education advising to integrate teaching and other essential professional experiences during their time at OSU.

## Option Code: 226

Options in the Biology major require 15 or fewer additional credits (one term) beyond the basic Biology major, and most students can complete the additional Pre-Education option course work in four years. Courses used to satisfy the Pre-Education option requirements also satisfy the Physics/Computer Science and Quantitative Applications and Experiential Learning or Integrative Biology Elective requirements in the Biology major.

For further information, see MyDegrees or the Integrative Biology website (<http://ib.oregonstate.edu>).

Code	Title	Credits
<b>Science Education Core</b>		
ED 309	FIELD PRACTICUM (3 or more credits involving middle and/or high school experience)	3-6
HDFS 313	ADOLESCENT DEVELOPMENT	4
SED 413	INQUIRY IN SCIENCE AND SCIENCE EDUCATION	3
or SED 416	INQUIRY IN SCIENCE AND MATHEMATICS EDUCATION	
PH 201 & PH 202 & PH 203	*GENERAL PHYSICS and *GENERAL PHYSICS and *GENERAL PHYSICS	15
<b>Electives</b>		
Select a minimum of three courses from the following: <sup>1</sup>		9
<i>Astronomy - OSU Integrated Science endorsement</i>		
PH 104	*DESCRIPTIVE ASTRONOMY	
<i>Atmospheric Sciences - OSU Integrated Science endorsement</i>		
ATS 201	*CLIMATE SCIENCE	
ATS 310	METEOROLOGY	
<i>Biology Teaching - Additional teaching experience</i>		
Select any combination of three credits:		
BI 309	TEACHING PRACTICUM (requires 2 or more terms to reach 3 credits)	
BI 409	ADVANCED TEACHING PRACTICUM (requires 2 or more terms to reach 3 credits)	
<i>Chemistry - OSU Chemistry endorsement</i>		
CH 411	INORGANIC CHEMISTRY	
<i>Geology - OSU Integrated Science endorsement</i>		
GEO 201	*PHYSICAL GEOLOGY	
GEO 202	*EARTH SYSTEMS SCIENCE	
GEO 203	*EVOLUTION OF PLANET EARTH	
GEO 221	*ENVIRONMENTAL GEOLOGY	

GEO 305	*LIVING WITH ACTIVE CASCADE VOLCANOES
GEO 306	*MINERALS, ENERGY, WATER AND THE ENVIRONMENT
GEO 307	*NATIONAL PARK GEOLOGY AND PRESERVATION
GEO 308	*GLOBAL CHANGE AND EARTH SCIENCES
GEO 352	*OREGON: GEOLOGY, PLACE, AND LIFE ON THE RING OF FIRE

### Integrative Biology <sup>2</sup>

BI 333 & BI 343	ADVANCED HUMAN ANATOMY AND PHYSIOLOGY and ADVANCED HUMAN ANATOMY AND PHYSIOLOGY LABORATORY
BI 353	PACIFIC NORTHWEST COASTAL ECOSYSTEMS (taught at Hatfield Marine Science Center)
BI 358	SYMBIOSES AND THE ENVIRONMENT
BI 375	FIELD METHODS IN ECOLOGICAL RESTORATION (taught at OSU Cascades)
BI 427	PALEOBIOLOGY
BI 456	PHYLOGENETICS
BI 481	BIOGEOGRAPHY
BI 483	POPULATION BIOLOGY
BI 485	MONSTER BIOLOGY
BI 495	DISEASE ECOLOGY
Z 350	ANIMAL BEHAVIOR
Z 361 & Z 362	INVERTEBRATE BIOLOGY and INVERTEBRATE BIOLOGY LABORATORY <sup>3</sup>
Z 365	BIOLOGY OF INSECTS
Z 371 & Z 372	VERTEBRATE BIOLOGY and VERTEBRATE BIOLOGY LABORATORY
Z 425	EMBRYOLOGY AND DEVELOPMENT
Z 432 & Z 442	VERTEBRATE PHYSIOLOGY II and VERTEBRATE PHYSIOLOGY LABORATORY
Z 438	BEHAVIORAL NEUROBIOLOGY
Z 473	HERPETOLOGY
<i>Oceanography - OSU Integrated Science endorsement</i>	
OC 201	*OCEANOGRAPHY
OC 332	COASTAL OCEANOGRAPHY

Total Credits 34-37

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Baccalaureate Core Course (BCC)

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Writing Intensive Course (WIC)

1

Students work with the Biology Pre-Education option advisor to select a minimum of three elective courses. Two of the electives must be upper division (300-400 level) coursework

2

Cannot be shared with Biology major requirements

3

Z 461 or BI 450 (taught at Hatfield Marine Science Center) may be taken in place of (Z 361 and Z 362)

BI 450 is by application only and may count for other major requirements

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