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 Quantitive 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).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 309</td>
<td>FIELD PRACTICUM (3 or more credits involving middle and/or high school experience)</td>
<td>3-6</td>
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<tr>
<td>HDFS 313</td>
<td>ADOLESCENT DEVELOPMENT</td>
<td>4</td>
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<tr>
<td>SED 413</td>
<td>INQUIRY IN SCIENCE AND SCIENCE EDUCATION</td>
<td>3</td>
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<tr>
<td>PH 201</td>
<td>*GENERAL PHYSICS</td>
<td>15</td>
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<tr>
<td>&amp; PH 202</td>
<td>and *GENERAL PHYSICS</td>
<td>9</td>
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<tr>
<td>&amp; PH 203</td>
<td>and *GENERAL PHYSICS</td>
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Electives

Select a minimum of three courses from the following:

Astronomy - OSU Integrated Science endorsement

PH 104 | DESCRIPTIVE ASTRONOMY | |

Atmospheric Science - OSU Integrated Science endorsement

ATS 201 | CLIMATE SCIENCE | |
ATS 310 | METEOROLOGY | |

Biological Teaching - Additional teaching experience

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) | |

Chemistry - OSU Chemistry endorsement

CH 411 | INORGANIC CHEMISTRY | |

Geology - OSU Integrated Science endorsement

GED 201 | PHYSICAL GEOLOGY | |
GED 202 | EARTH SYSTEMS SCIENCE | |
GED 203 | EVOLUTION OF PLANET EARTH | |
GED 221 | ENVIRONMENTAL GEOLOGY | |
GED 305 | LIVING WITH ACTIVE CASCADE VOLCANOES | |
GED 306 | MINERALS, ENERGY, WATER, AND THE ENVIRONMENT | |
GED 307 | NATIONAL PARK GEOLOGY AND PRESERVATION | |
GED 308 | GLOBAL CHANGE AND EARTH SCIENCES | |
GED 352 | OREGON: GEOLOGY, PLACE, AND LIFE ON THE RING OF FIRE | |

Integrated Biology

BI 333 | 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 | SYMBIOSIS 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 | INVERTEBRATE BIOLOGY & Z 362 and INVERTEBRATE BIOLOGY LABORATORY 2 | |
Z 365 | BIOLOGY OF INSECTS | |
Z 371 | VERTEBRATE BIOLOGY & Z 372 and VERTEBRATE BIOLOGY LABORATORY | |
Z 425 | EMBRYOLOGY AND DEVELOPMENT | |
Z 432 | VERTEBRATE PHYSIOLOGY II & Z 442 and VERTEBRATE PHYSIOLOGY LABORATORY | |
Z 438 | BEHAVIORAL NEUROBIOLOGY | |
Z 473 | HERPETOLOGY | |
OC 201 | OCEANOGRAPHY | |
OC 332 | COASTAL OCEANOGRAPHY | |

Total Credits 34-37

1 Baccalaureate Core Course (BCC)
2 Writing Intensive Course (WIC)
3 Cannot be shared with Biology major requirements

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. Cannot be shared with Biology major requirements.

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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