**PRE-EDUCATION BIOLOGY OPTION**

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

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. 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.

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 Upper-division Science Electives requirements in the Biology major.

It is recommended that Pre-Education option students take COMM 111 *PUBLIC SPEAKING to complete the Biology major OSU Baccalaureate Core communications requirement.

For further information, see MyDegrees or the Integrative Biology website at http://ib.oregonstate.edu.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<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>HDF 313</td>
<td>ADOLESCENT DEVELOPMENT</td>
<td>4</td>
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<tr>
<td>SED 412</td>
<td>TECHNOLOGY FOUNDATIONS FOR TEACHING MATH AND SCIENCE</td>
<td>3</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>or SED 416</td>
<td>INQUIRY IN SCIENCE AND MATHEMATICS EDUCATION</td>
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**Chemistry Course**  
Select one of the following:  
- BB 493 BIOCHEMISTRY LABORATORY MOLECULAR TECHNIQUES 1  
- CH 324 QUANTITATIVE ANALYSIS  
- CH 390 ENVIRONMENTAL CHEMISTRY

**Physics Series**  
- PH 201 *GENERAL PHYSICS 5  
- PH 202 *GENERAL PHYSICS 5  
- PH 203 *GENERAL PHYSICS 5

**Integrated Science Courses**  
Select two of the following:  
- ATS 201 *CLIMATE SCIENCE  
- ATS 310 METEOROLOGY

Total Hours: 37-43  
* Baccalaureate Core Course (BCC)  
^ Writing Intensive Course (WIC)