BIOLOGY: SECONDARY TEACHER CERTIFICATION, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2024-2025. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.50
Total Hours: 120

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
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<td>Select one of the following:</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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American History & Government

HIST 1103 | Survey of American History | 3     |
| or HIST 1483 | American History to 1865 (H) |       |
| or HIST 1493 | American History Since 1865 (DH) |       |
| POLS 1113 | American Government                 | 3     |

Analytical & Quantitative Thought (A)

MATH 1813 | Preparation for Calculus (A) (or higher) | 3     |

STAT 4013 | Statistical Methods I (A)              | 3     |
| or STAT 2013 | Elementary Statistics (A)           |       |

Humanities (H)

PHIL 3933 | Creation and Evolution                 | 3     |

Courses designated (H) | 3     |

Natural Sciences (N)

Must include one Laboratory Science (L) course

PHYS 1114 | College Physics I (LN)                 | 4     |
| or PHYS 2014 | University Physics I (LN)             |       |

BIOL 1113 | Introductory Biology (N)               | 4     |
| & BIOL 1111 | and Introductory Biology Laboratory (LN) | 1,2  |
| or BIOL 1114 | Introductory Biology (LN)            |       |

PBIO 1404 | Plant Biology (LN)                     | 4     |

Social & Behavioral Sciences (S)

Course designated (S) | 3     |

Additional General Education

Courses designated (A), (H), (N), or (S) | 1     |

Diversity (D) & International Dimension (I)

May be completed in any part of the degree plan

Select at least one Diversity (D) course

Select at least one International Dimension (I) course

College/Departmental Requirements

First Year Seminar

(Transfer students with 15 hours exempt) | 1     |

Arts & Humanities

See note 2.a.

Course designated (H) | 3     |

Natural & Mathematical Sciences

CHEM 1314 | Chemistry I (LN)                       | 2     |
| CHEM 1515 | Chemistry II (LN)                      | 5     |

Foreign Language

See note 3

0-6 hours

Upper-Division General Education

Select 6 hours outside major department

See note 2.c.

Hours Subtotal: 13

Major Requirements

Biology Core:

Minimum GPA 2.50 and minimum grade of "C" or "P" for courses in Biology Core and those denoted with 2

BIOL 1604 | Animal Biology                          | 4     |
| BIOL 3023 | General Genetics                        | 3     |
| BIOL 3034 | General Ecology                         | 4     |
| BIOL 3204 | Physiology                              | 4     |
| BIOL 4133 | Evolution                               | 3     |

CHM 3013 | Survey of Organic Chemistry             | 3     |
| MICR 2123 | Introduction to Microbiology            | 3     |
| MICR 2132 | Introduction to Microbiology Laboratory | 2     |
| MICR 3033 | Cell and Molecular Biology              | 3     |

Select 3 hours PBIO coursework 3000- or 4000-level. | 3     |

Secondary Education Professional Core:

Minimum GPA 2.50 and minimum grade of "C" or "P" in each course

SMED 1012 | Inquiry Approaches to Teaching          | 2     |
| SMED 3013 | Knowing and Learning in Mathematics and Science | 3 |
| SMED 4023 | Problem-Based Learning in Mathematics and Science | 3 |
| SMED 4611 | Authentic Research in the Science Classroom | 3 |

SMED 4613 | Teaching the Nature of Science Through an Inquiry Approach | 3 |

SMED 4713 | Teaching and Learning Science in the Secondary School | 3 |
| SMED 4723 | Senior Seminar in Secondary Mathematics and Science Education | 3 |

SPED 3202 | Educating Exceptional Learners (D)      | 2     |
| CIED 3313 | Field Experience in the Secondary Schools | 3 |
| CIED 4133 | Introduction to K-12 English Language Learners | 3 |
| CIED 4720 | Internship in the Secondary Classroom | 3 |

Hours Subtotal: 64
Electives
Select 3 hours 3
MATH 1513 required for students who do not place directly into
MATH 1813 (or MATH 1613).
May need to include 3 hours of a foreign language (see note 3)

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Total Hours 120

Other Requirements
- See the College of Arts and Sciences Requirements.
- Minimum GPA 2.00 in all BIOL courses.
- **Upper-Division Credit**: Total hours must include at least 40 hours in
courses numbered 3000 or above.

Additional State/OSU Requirements
- At least: 60 hours at a four-year institution; 30 hours completed at
OSU; 15 of the final 30 or 50% of the upper-division hours in the major
field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-
fourth of hours earned by correspondence; 8 transfer correspondence
hours.
- Students will be held responsible for degree requirements in effect at
the time of matriculation and any changes that are made, so long as
these changes do not result in semester credit hours being added or
do not delay graduation.
- Degrees that follow this plan must be completed by the end of
Summer 2030.