GEOLOGY: SECONDARY TEACHER CERTIFICATION, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2021-2022. 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>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
</tr>
<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
<td></td>
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</tbody>
</table>

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)       |       |

Analytical & Quantitative Thought (A)

MATH 2144 | Calculus I (A)                           | 4     |
3 hours STAT designated (A)                             | 3     |

Humanities (H)

PHIL 3933 | Creation and Evolution                   | 3     |

Course designated (H)                                  | 3     |

Natural Sciences (N)

Must include one Laboratory Science (L) course

GEOL 1114 | Physical Geology (LN)                    | 4     |
BIOL 1114 | Introductory Biology (LN)                | 4     |
PHYS 2014 | University Physics I (LN)                | 4     |
     or PHYS 1114 | College Physics I (LN)          |       |

Social & Behavioral Sciences (S)

Course designated (S)                                  | 3     |

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.                                        | 3     |

Natural & Mathematical Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1314</td>
<td>Chemistry I (LN)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1515</td>
<td>Chemistry II (LN)</td>
<td>5</td>
</tr>
</tbody>
</table>

Foreign Language

See note 3                                                      | 0     |

0-6 hours

Upper-Division General Education

Select 6 hours outside major department. See note 2.c.

Hours Subtotal                                               | 13    |

Major Requirements

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

ASTR 1023 | Stars, Galaxies, Universe (N)              | 3     |
GEOL 1224 | Evolution of the Earth (LN)                | 4     |
GEOL 2464 | Rocks and Minerals                         | 4     |
GEOL 2773 | Introduction to Planetary Geology (N)      | 3     |
GEOL 3014 | Structural Geology                         | 4     |
GEOL 3034 | Principles of Stratigraphy and Sedimentology | 4   |
GEOL 3503 | Environmental Geology                      | 3     |
GEOL 4503 | Introduction to Oceanography (N)           | 3     |
GEOG 3023 | Climatology (N)                            | 3     |
     or GEOG 3033 | Meteorology (N)                      |       |

Secondary Education Professional Core

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

SMEC 1012 | Inquiry Approaches to Teaching            | 2     |
SMEC 3013 | Knowing and Learning in Mathematics and Science | 3   |
SMEC 4013 | Classroom Interactions                    | 3     |
SMEC 4023 | Problem-Based Learning in Mathematics and Science | 3   |
SMEC 4611 | Authentic Research in the Science Classroom | 1    |
SMEC 4613 | Teaching the Nature of Science Through an Inquiry Approach | 3   |
SMEC 4713 | Teaching and Learning Science in the Secondary School | 3   |
SMEC 4723 | Senior Seminar in Secondary Mathematics and Science Education | 3   |
SPED 3202 | Educating Exceptional Learners (D)        | 2     |
CIED 4720 | Internship in the Secondary Classroom (6 hours) | 3   |

Hours Subtotal                                               | 60    |

Electives

Select 7 hours

May need to include 6 hours of a foreign language (see note 3)

Suggested electives for Physical Science Certification:

CHEM 3013 or CHEM 3015 and PHYS 1214 or PHYS 2114

MATH 1513 and MATH 1813 required for students who do not place directly into MATH 2144

Hours Subtotal                                               | 7     |

Total Hours                                                  | 120   |
1 College and Departmental Requirements that may be used to meet General Education Requirements.
2 Minimum GPA 2.50 and minimum grade of "C" or "P" for courses in Geology Core and those denoted with 2.
3 Full admission to Professional Education required.

**Other Requirements**

- See the College of Arts and Sciences Requirements.
- **Upper-Division Credit**: Total hours must include at least 40 hours in courses numbered 3000 or above.
- **Hours in One Department**: For B.A. and B.S. degrees, no more than 54 hours in one department may be applied to degree requirements.

**College of Arts and Sciences Requirements**

1. **General Education Requirements**
   No more than two courses (or eight hours) from the major department (http://catalog.okstate.edu/college-arts-sciences-major-departments/) may be used to meet General Education and College and Departmental Requirements. The General Education required English Composition, required U.S. History, required American Government, one required MATH or STAT course, and required foreign language for B.A. degrees do not count against the two-course maximum.

2. **A&S College/Departmental Requirements**
   a. Arts and Humanities are defined as any course carrying an (H) designation or courses from AMST, ART, DANC, ENGL (except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except PHIL 1313 Logic and Critical Thinking (A), PHIL 3003 Symbolic Logic (A) and PHIL 4003 Mathematical Logic and Computability), REL, TH, and foreign languages.
   b. Natural and Mathematical Sciences are defined as any course from the following prefixes: ASTR, BIOC, BIOL, CHEM, CS (except CS 4883 Social Issues in Computing), GEOL, MATH, MICR, PBIO, PHYS, and STAT; or courses from other departments that carry an (A) or (N) general education designation.
   c. The required six hours of upper-division General Education may not include courses from the student’s major department. This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   d. Non-Western Studies Requirement for B.A. and B.F.A.; One 3-hour course in Non-Western Studies (N.W.). This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   e. The College of Arts & Sciences requires a minimum 2.0 GPA in all major requirements and a minimum 2.0 GPA in all major-prefix courses applied to the degree.

3. **Foreign Language Proficiency**
   a. The foreign language requirement for the B.A. may be satisfied by 9 hours college credit in the same language, which must include 3 hours at the 2000-level, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement. Currently Arabic and Mvskoke are not offered at the 2000-level at OSU.
   b. The foreign language requirement for the B.S., B.M. and B.F.A. may be satisfied by presenting a high school transcript which demonstrates two years of study of a single foreign language (passing grades at second-year level of study). It may also be satisfied by 6 hours college credit in the same language, which must include language courses 1713 and 1813, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement.
   c. In addition to a. and b., students pursuing teacher certification must meet novice-high foreign language proficiency by presenting a high school transcript which demonstrates two years of study of a single foreign language with no grade below B. Or, students may complete 3 hours college credit in a single language with no grade below C (or pass an advanced standing examination, College Level Examination Program (CLEP) exam, or Oral Proficiency Interview developed by the American Council on the Teaching of Foreign Languages, equivalent to 3 hours of college credit.) Or, students may meet the requirement by transfer of documentation of meeting the foreign language competency from one of the teacher education programs in the State of Oklahoma approved by the Oklahoma State Regents for Higher Education.

4. **Exclusions**
   a. Courses used to satisfy the General Education English Composition, U.S. History, American Government, and Mathematics or Statistics requirements will not count toward the 54-hour maximum allowed from one department.
   b. Courses with ATHL or LEIS prefixes and leisure activity courses may not be used for degree credit.

5. **Teacher Certification**
   Students can satisfy the requirements for secondary schools teaching certification while earning a B.A. or B.S. in the College of Arts & Sciences. Those interested should see their Arts and Sciences advisor and the OSU Professional Education Unit in room 325 Willard.

**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 2027.

**Example Plan of Study**

**Finish in Four Plan of Study**

The plan below is an example of how students can successfully complete degree requirements in four years. This suggested class schedule plan may be used as a guide and can be adjusted based on individual
needs. Students are required to meet with an academic advisor prior to enrollment each semester to plan their class schedule, and students are ultimately responsible for completing all degree requirements.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Freshman</strong></td>
<td></td>
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<tr>
<td>Fall</td>
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<tr>
<td>A&amp;S 1111  A&amp;S First Year Seminar</td>
<td>1</td>
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<tr>
<td>MATH 2144  Calculus I (A)</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 1114  Physical Geology (LN)</td>
<td>4</td>
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<tr>
<td>BIOL 1114  Introductory Biology (LN)</td>
<td>4</td>
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<tr>
<td>SMED 1012  Inquiry Approaches to Teaching</td>
<td>2</td>
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<tr>
<td><strong>Hours</strong></td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>CHEM 1314  Chemistry I (LN)</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 1224  Evolution of the Earth (LN)</td>
<td>4</td>
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<td>3 hours STAT designated (A)</td>
<td>3</td>
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<tr>
<td>General Education courses</td>
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<td><strong>Hours</strong></td>
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<td><strong>Sophomore</strong></td>
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<td>Fall</td>
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<td>CHEM 1515  Chemistry II (LN)</td>
<td>5</td>
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<tr>
<td>GEOL 2464  Rocks and Minerals</td>
<td>4</td>
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<tr>
<td>GEOG 3023  Climatology (N) or GEOG 3033  Meteorol (N)</td>
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<td>General Education and College courses</td>
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<tr>
<td><strong>Hours</strong></td>
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<tr>
<td><strong>Spring</strong></td>
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<td>GEOL 3503  Environmental Geology (N)</td>
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<td>GEOL 4300  Geology Colloquium</td>
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<td>PHYS 1114  College Physics I (LN) or PHYS 2114  University Physics I (LN)</td>
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<td>Major, College, and Elective courses</td>
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<td>Fall</td>
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<td>GEOL 3014  Structural Geology</td>
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<tr>
<td><strong>Hours</strong></td>
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<tr>
<td><strong>Summer</strong></td>
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<td>GEOL 3546  Field Geology</td>
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<td><strong>Hours</strong></td>
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<td><strong>Senior</strong></td>
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<td>SMED 4023  Problem-Based Learning in Mathematics and Science</td>
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<td>SMED 4713  Teaching and Learning Science in the Secondary School</td>
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<td>CIED 4720  Internship in the Secondary Classroom</td>
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<td>SMED 4723  Senior Seminar in Secondary Mathematics and Science Education</td>
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<td><strong>Hours</strong></td>
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**Total Hours** 120