# GEOPHYSICS, BS

## Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2022-2023. Learn more about University Academic Regulation 3.1 ([http://catalog.okstate.edu/university-academic-regulations/#matriculation](http://catalog.okstate.edu/university-academic-regulations/#matriculation)).

**Minimum Overall Grade Point Average:** 2.00  
**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>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
<td></td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
<td>3</td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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**American History & Government**  
HIST 1103  
or HIST 1483  
or HIST 1493  
POLS 1113

**Analytical & Quantitative Thought (A)**  
MATH 2144  
Calculus I (A)<sup>1</sup>  
4

**Humanities (H)**  
Courses designated (H)  
6

**Natural Sciences (N)**  
Must include one Laboratory Science (L) course  
CHEM 1314  
Chemistry I (LN)<sup>1</sup>  
4  
PHYS 2014  
University Physics I (LN)<sup>1</sup>  
4

**Social & Behavioral Sciences (S)**  
Course designated (S)  
3

**Additional General Education**  
Courses designated (A), (H), (N), or (S)  
7

**Hours Subtotal:** 40

**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.

**Natural & Mathematical Sciences**  
MATH 2153  
Calculus II (A)  
3  
MATH 2163  
Calculus III  
3  
MATH 2233  
Differential Equations  
3

**Foreign Language**  
0-6 hours. See note 3.

**Upper-Division General Education**  
Select 6 hours outside major department. See note 2.c.

**Hours Subtotal:** 13

**Major Requirements**  
Minimum grade of "C" in all Geology courses.  
GEOL 1114  
Physical Geology (LN)  
4  
GEOL 1224  
Evolution of the Earth (LN)  
4  
GEOL 2103  
Fundamentals of Geophysics  
3  
GEOL 2464  
Rocks and Minerals  
4  
GEOL 3014  
Structural Geology  
4  
GEOL 3034  
Principles of Stratigraphy and Sedimentology  
4  
GEOL 4113  
Seismic Interpretation  
3  
GEOL 4543  
Introduction to Exploration Seismology  
3  
PHYS 2114  
University Physics II (LN)  
4  
PHYS 3513  
Mathematical Physics  
3

Select 18 hours from the following:  
GEOL 4023  
Petroleum Geology  
GEOL 4213  
Plate Tectonics  
GEOL 4313  
Introduction to Well Log Analysis  
GEOL 4433  
Applied Geostatistics  
GEOL 4443  
Environmental Geophysics  
GEOL 4453  
Hydrogeology  
GEOL 4463  
Physical Hydrogeology  
GEOL 4643  
Seismic Data Processing  
GEOL 4990  
Special Problems in Earth Science (1-9 hours)  
GEOL 4993  
Senior Honors Thesis  
GEOG 4333  
Remote Sensing

**Hours Subtotal:** 54

**Electives**  
Select 13 hours  
May need to include 6 hours of a foreign language. See note 3  
May need to include 6 hours upper-division general outside major department (see note 2.c.) and 8 additional upper-division hours  
MATH 1513 and MATH 1813 required for students who do not place directly into MATH 2144

**Recommended courses:**  
CS 1103  
Computer Programming (A)  
or CS 1113  
Computer Science I (A)  
MATH 3013  
Linear Algebra (A)  
PHYS 4113  
Electricity and Magnetism

**Hours Subtotal:** 13

**Total Hours:** 120

1 College and Departmental Requirements that may be used to meet General Education Requirements.
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.

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 2028.