PHYSICS, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2020-2021. Learn more about University Academic Regulation 3.1 (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</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>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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</table>

American History & Government

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

Analytical & Quantitative Thought (A)

MATH 2144  Calculus I (A) | 4
MATH 2153  Calculus II (A) | 3

Humanities (H)

Courses designated (H) | 6

Natural Sciences (N)

Must include one Laboratory Science (L) course

CHEM 1314  Chemistry I (LN) | 4

Course designated (N) | 2

Social & Behavioral Sciences (S)

Courses designated (S) | 3

Additional General Education

Courses designated (A), (H), (N), or (S) | 6

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. | 3

Natural & Mathematical Sciences

CHEM 1515  Chemistry II (LN) | 5
PHYS 2014  University Physics I (LN) | 4

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 GPA 2.00 with a minimum grade of “C” in each course

Core Requirements

PHYS 2114  University Physics II (LN) | 4
PHYS 2203  University Physics III | 3
PHYS 3013  Mechanics I | 3
PHYS 3323  Modern Laboratory Methods I | 3
PHYS 3513  Mathematical Physics | 3
PHYS 3623  Modern Laboratory Methods II | 3
PHYS 3713  Modern Physics | 3
PHYS 4113  Electricity and Magnetism | 3
PHYS 4513  Introductory Quantum Mechanics | 3
PHYS 4712  Senior Project | 2
PHYS 4813  Electromagnetic Radiation | 3
MATH 2163  Calculus III | 3
MATH 2233  Differential Equations | 3

Additional Requirements

Select 9 upper-division hours in Physics | 9
Select 6 upper-division hours | 6

Hours Subtotal | 54

Electives

Select 13 hours | 13

May need to include 6 hours of a foreign language (see note 3)
May need to include 6 hours upper-division general education outside major department (see note 2.c.)

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

Suggested electives: ASTR, CS, and MATH

Hours Subtotal | 13

Total Hours | 120

1 College and Departmental Requirements that may be used to meet Gen Ed 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/shared/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), GEOG, 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 2026.

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 adviser 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</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Fall</td>
<td></td>
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</tr>
<tr>
<td>MATH 2144</td>
<td>Calculus I (A)</td>
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<td>CHEM 1314</td>
<td>Chemistry I (LN)</td>
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<td>General Education courses</td>
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<tr>
<td></td>
<td>Hours</td>
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<td>Spring</td>
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<tr>
<td>MATH 2153</td>
<td>Calculus II (A)</td>
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<td>PHYS 2014</td>
<td>University Physics I (LN)</td>
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<td>CHEM 1515</td>
<td>Chemistry II (LN)</td>
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<td></td>
<td>Hours</td>
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### Sophomore

#### Fall

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<tr>
<td>PHYS 2114</td>
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<td>MATH 2163</td>
<td>Calculus III</td>
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**General Education courses** 9

**Hours** 16

#### Spring

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<th>Course</th>
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<tr>
<td>PHYS 2203</td>
<td>University Physics III</td>
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<td>MATH 2233</td>
<td>Differential Equations</td>
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**College and Elective courses** 8

**Hours** 14

### Junior

#### Fall

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<th>Course</th>
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<tbody>
<tr>
<td>PHYS 3323</td>
<td>Modern Laboratory Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3513</td>
<td>Mathematical Physics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3013</td>
<td>Linear Algebra (A)</td>
<td>3</td>
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**Major, College, and Elective courses** 6

**Hours** 15

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PHYS 3013</td>
<td>Mechanics I</td>
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<td>PHYS 3623</td>
<td>Modern Laboratory Methods II</td>
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<tr>
<td>PHYS 3713</td>
<td>Modern Physics</td>
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**Major, College, and Elective courses** 6

**Hours** 15

### Senior

#### Fall

<table>
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<td>PHYS 4113</td>
<td>Electricity and Magnetism</td>
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**Major, College, and Elective courses** 12

**Hours** 15

#### Spring

<table>
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<tr>
<td>PHYS 4712</td>
<td>Senior Project</td>
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<td>PHYS 4513</td>
<td>Introductory Quantum Mechanics</td>
<td>3</td>
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</table>

**Major, College, and Elective courses** 10

**Hours** 15

**Total Hours** 120

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1. Speak with academic advisor about saving General Education electives and Humanities (H) for Upper-division courses with International (I) and Diversity (D) dimensions.