

PHYSICS: APPLIED PHYSICS, BS

Requirements for Students Matriculating in or before Academic Year 2018-2019. 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

| Code | Title | Hours |
|---|--|-----------|
| General Education Requirements | | |
| <i>English Composition</i> | | |
| See Academic Regulation 3.5 (http://catalog.okstate.edu/university-academic-regulations/#english-composition) | | |
| ENGL 1113 | Composition I | 3 |
| or ENGL 1313 | Critical Analysis and Writing I | |
| Select one of the following: | | 3 |
| ENGL 1213 | Composition II | |
| ENGL 1413 | Critical Analysis and Writing II | |
| ENGL 3323 | Technical Writing | |
| <i>American History & Government</i> | | |
| HIST 1103 | Survey of American History | 3 |
| POLS 1113 | American Government | 3 |
| <i>Analytical & Quantitative Thought (A)</i> | | |
| MATH 2144 | Calculus I (A) ¹ | 4 |
| <i>Humanities (H)</i> | | |
| Courses designated (H) | | 6 |
| <i>Natural Sciences (N)</i> | | |
| Must include one Laboratory Science (L) course | | |
| BIOL 1114 | Introductory Biology (LN) ¹ | 4 |
| CHEM 1314 | Chemistry I (LN) ¹ | 4 |
| <i>Social & Behavioral Sciences (S)</i> | | |
| Courses designated (S) | | 3 |
| <i>Additional General Education</i> | | |
| 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 | | |
| <i>First Year Seminar</i> | | |
| (Transfer students with 15 hours exempt) | | 1 |
| <i>Arts & Humanities</i> | | |
| See note 2.a. | | 3 |
| <i>Natural & Mathematical Sciences</i> | | |
| CHEM 1515 | Chemistry II (LN) | 5 |
| PHYS 2014 | University Physics I (LN) | 4 |
| <i>Foreign Language</i> | | |
| 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

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 |
| MATH 2153 | Calculus II (A) | 3 |
| MATH 2163 | Calculus III | 3 |
| MATH 2233 | Differential Equations | 3 |

Additional Requirements

Select 9 upper-division hours in in any one academic department ² 9

Select 9 upper-division hours ² 9

Hours Subtotal 52

Electives

Select 15 hours ² 15

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.).

Suggested courses:

| | | |
|-----------|--|--|
| CS 1113 | Computer Science I (A) | |
| CS 2433 | C/C++ Programming | |
| ASTR 1013 | The Solar System (N) | |
| ASTR 1023 | Stars, Galaxies, Universe (N) | |
| MATH 3013 | Linear Algebra | |
| MATH 3613 | Introduction to Abstract Algebra | |
| MATH 4023 | Introduction to Analysis | |
| MATH 4233 | Intermediate Differential Equations | |
| MATH 4263 | Introduction to Partial Differential Equations | |
| MATH 4283 | Complex Variables | |

Hours Subtotal 15

Total Hours 120

¹ College and Departmental Requirements that may be used to meet Gen Ed Requirements.

² With approval from the adviser and department head, a maximum of 30 hours from an accredited doctoral health program may be used for these 18 hours and up to 12 hours of electives.

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:** Hours in one department in excess of 54 will be added to the minimum total of 120 required for graduation.

College of Arts and Sciences Requirements

1. General Education Requirements

No more than two courses (or eight hours) from the major department 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

- 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.
- 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.
- 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).
- 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).
- 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.

3. Foreign Language Proficiency

- 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.
- 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.

- 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

- 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.
- 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 adviser 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 2024.