

# PHYSICS: SECONDARY TEACHER CERTIFICATION, 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: 2.50**

**Total Hours: 120**

Code	Title	Hours
<b>General Education Requirements</b>		
<i>English Composition</i>		
See Academic Regulation 3.5 ( <a href="http://catalog.okstate.edu/university-academic-regulations/#english-composition">http://catalog.okstate.edu/university-academic-regulations/#english-composition</a> )		
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 &amp; Government</i>		
HIST 1103	Survey of American History	3
POLS 1113	American Government	3
<i>Analytical &amp; Quantitative Thought (A)</i>		
MATH 2144	Calculus I (A) <sup>1,2</sup>	4
MATH 2153	Calculus II (A) <sup>1,2</sup>	3
<i>Humanities (H)</i>		
PHIL 3743	Patterns in Science: Historical and Value Dimensions of Western Science (H) <sup>1</sup>	3
PHIL 3933	Creation and Evolution (H) <sup>1</sup>	3
<i>Natural Sciences (N)</i>		
Must include one Laboratory Science (L) course		
BIOL 1114	Introductory Biology (LN) <sup>1,2</sup>	4
CHEM 1314	Chemistry I (LN) <sup>1,2</sup>	4
PHYS 2014	University Physics I (LN) <sup>1,2</sup>	4
<i>Social &amp; Behavioral Sciences (S)</i>		
Courses designated (S)		3
<b>Hours Subtotal</b>		40
<b>Diversity (D) &amp; International Dimension (I)</b>		
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		
<b>College/Departmental Requirements</b>		
<i>First Year Seminar</i>		
(Transfer students with 15 hours exempt)		1
<i>Arts &amp; Humanities</i>		
See note 2.a.		3
<i>Natural &amp; Mathematical Sciences</i>		
CHEM 1515	Chemistry II (LN) <sup>2</sup>	5
PHYS 2114	University Physics II (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**

*Physics Core*

Minimum GPA 2.50 and minimum grade of "C" or "P"

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 2163 Calculus III 3

MATH 2233 Differential Equations 3

STAT 4013 Statistical Methods I (A) 3

**Additional Requirements:**

6 upper-division hours in Physics 6

*Secondary Education Professional Core*

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

SMED 1011 Inquiry Approaches to Teaching - Step 1 1

SMED 2011 Inquiry-Based Lesson Design-Step 2 1

SMED 3013 Knowing and Learning in Mathematics and Science 3

SMED 4013 Classroom Interactions 3

SMED 4023 Problem-Based Learning in Mathematics and Science 3

SMED 4611 Authentic Research in the Science Classroom 1

SMED 4613 Teaching the Nature of Science Through an Inquiry Approach <sup>3</sup> 3

SMED 4713 Teaching and Learning Science in the Secondary School <sup>3</sup> 3

SMED 4723 Senior Seminar in Secondary Mathematics and Science Education <sup>3</sup> 3

SPED 3202 Educating Exceptional Learners (D) 2

CIED 4720 Internship in the Secondary Classroom <sup>3</sup> 6

**Hours Subtotal** 65

**Electives**

Select 2 hours 2

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

**Hours Subtotal** 2

**Total Hours** 120

<sup>1</sup> College and Departmental Requirements that may be used to meet Gen Ed Requirements.

<sup>2</sup> Minimum GPA 2.50 and minimum grade of "C" or "P"

<sup>3</sup> 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:** 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.