

Program: **Science Education**  
 Major: **Science Education - Physics**  
 Degree: **Bachelor of Science in Education (B.S.Ed.)**

Dept: **Engineering and Physics**  
 College: **Mathematics and Science**  
 Major Code: **6044**

**University Core (Total Listed 42-44)**

Specific courses within the University Core are listed on pages 95-96.

• Courses from the major may apply to the areas marked in the University Core.

• **Written and Oral Communication..... 9**

**Quantitative Reasoning/Scientific Method ..... 10-11**

- Math..... 3
- Life Science..... 4
- Physical Science..... 3-4

**Critical Inquiry and Aesthetic Analysis..... 6**

- Aesthetic Analysis..... 3
- Critical Inquiry..... 3

**American Historical and Political Analysis ..... 6**

- American National Government ..... 3
- American History ..... 3

**Cultural and Language Analysis ..... 3-4**

- Second Language..... 4
- OR
- Cultural Analysis..... 3

**Social and Behavioral Analysis..... 3**

**Life Skills ..... 5**

- Required Health Course..... 2
- Elective Life Skills..... 3

**Minimum  
Required Hours**

**Support Courses ..... 9-15**

- MCOM 1113 Fundamentals of Speech
- ENG 1113 English Composition
- ENG 1213 English Composition and Research

- \*MATH 1533 Precalculus-Algebra **OR**
- MATH 1513 College Algebra **OR** Placement Score **AND**
- \*MATH 1593 Plane Trigonometry **OR** Placement Score

\*A grade of 'C' or better is required for either MATH 1513 or MATH 1533 and MATH 1593 to take MATH 2313.

**Major Requirements**

**Science Education - Physics ..... 62**

**Science Education Core ..... 34**

Biology ..... 9

Required courses:

- BIO 1204 Biology for Majors: Principles
- BIO 1225 Biology for Majors: Diversity

Chemistry..... 10

Required courses:

- CHEM 1103 General Chemistry I **AND**
- CHEM 1112 General Chemistry I Recitation/Lab
- CHEM 1223 General Chemistry II **AND**
- CHEM 1232 General Chemistry II Recitation/Lab

Physics ..... 8

Required courses:

- PHY 2014 Physics for Science and Engineering I and Lab
- PHY 2114 Physics for Science and Engineering II and Lab

Earth Science ..... 4

Required course:

- PHY 3014 Earth Science

Computer Science..... 3

Required course:

- CMSC 1513 Beginning Programming

**Minimum  
Required Hours**

**Science Education - Physics ..... 28**

Math Courses ..... 15

- MATH 2313 Calculus 1
- MATH 2323 Calculus 2
- MATH 2333 Calculus 3
- MATH 2343 Calculus 4
- MATH 3103 Differential Equations

Physics and Engineering Courses ..... 13

- ENGR 2033 Statics
- ENGR 2043 Dynamics
- ENGR 3303 Engineering Probability and Statistics
- ENGR 2303 Electrical Science
- ENGR 2311 Electrical Science Lab

**Professional Education ..... 31**

- PTE 1010 Introduction to Teacher Education
- PTE 3023 Foundations of American Education/Clinical Exp
- PTE 3153 Adolescent Psychology
- SPED 4123 Teaching Individuals with Disabilities
- ^BIO 4812 Teaching and Learning in Science Classrooms
- ^BIO 4853 General Methods of Teaching Science and Lab
- ^PTE 4172 Educational Assessment
- ^PTE 4533 Contemporary Learning Sciences
- ^#PTE 4811 Contemporary Issues
- ^#PTE 4838 Internship/Student Teaching Secondary
- ^#PTE 4853 Classroom Management & Instruction

^ Admission to Teacher Education required

#To be taken the same semester

**Minimum Hours required ..... 125\***

\*Total hours required for this major may exceed the minimum 124 credit hour institutional requirement and will vary according to course selection. It is recommended students complete high school algebra II, trigonometry, and two years of a second language in high school.

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### **Minimum Graduation Requirements**

1. Overall GPA in all college course work ..... **2.50**
2. Average in course work at UCO ..... **2.00**
3. Courses in English Composition, Fundamentals of Speech, Professional Education, and area of specialization (major)..... **“C”**
4. Proficiency in foreign language ..... **Novice 4 level**

**For other regulations pertaining to graduation, see pages 66-67 of the 2019-2020 catalog.**