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

Department: 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 96-97.  
• Courses from the major may apply to the areas marked in the University Core.

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

Quantitative Reasoning/Scientific Method .................................. 3-11
• Math.......................................................................................... 3
• Life Science ............................................................................ 4
• Physical Science ..................................................................... 3-4

Critical Inquiry and Aesthetic Analysis ........................................ 6
Aesthetic Analysis .................................................................... 3
Critical Inquiry ......................................................................... 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 Algebra for STEM OR Placement Score AND
*MATH 1593 Plane Trigonometry OR Placement Score

* A grade of ‘C’ or better is required for both MATH 1533 and 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

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

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 2303 Electrical Science
ENGR 2311 Electrical Science Lab
ENGR 2313 Statics
ENGR 2333 Engineering Probability and Statistics
ENGR 2353 Engineering Probability and Statistics
ENGR 2363 Engineering Probability and Statistics
ENGR 2383 Engineering Probability and Statistics
ENGR 2403 Engineering Probability and Statistics
ENGR 2433 Engineering Probability and Statistics
ENGR 2453 Engineering Probability and Statistics
ENGR 2483 Engineering Probability and Statistics
ENGR 2503 Engineering Probability and Statistics
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ENGR 2603 Engineering Probability and Statistics
ENGR 2683 Engineering Probability and Statistics
ENGR 2703 Engineering Probability and Statistics
ENGR 2783 Engineering Probability and Statistics
ENGR 2803 Engineering Probability and Statistics
ENGR 2883 Engineering Probability and Statistics
ENGR 2903 Engineering Probability and Statistics
ENGR 2983 Engineering Probability and Statistics
ENGR 3003 Engineering Probability and Statistics
ENGR 3083 Engineering Probability and Statistics
ENGR 3103 Engineering Probability and Statistics
ENGR 3203 Engineering Probability and Statistics
ENGR 3303 Engineering Probability and Statistics
ENGR 3403 Engineering Probability and Statistics
ENGR 3503 Engineering Probability and Statistics
ENGR 3603 Engineering Probability and Statistics
ENGR 3703 Engineering Probability and Statistics
ENGR 3803 Engineering Probability and Statistics
ENGR 3903 Engineering Probability and Statistics
ENGR 4003 Engineering Probability and Statistics
ENGR 4083 Engineering Probability and Statistics
ENGR 4103 Engineering Probability and Statistics
ENGR 4203 Engineering Probability and Statistics
ENGR 4303 Engineering Probability and Statistics
ENGR 4403 Engineering Probability and Statistics
ENGR 4503 Engineering Probability and Statistics
ENGR 4603 Engineering Probability and Statistics
ENGR 4703 Engineering Probability and Statistics
ENGR 4803 Engineering Probability and Statistics
ENGR 4903 Engineering Probability and Statistics
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ENGR 9703 Engineering Probability and Statistics
ENGR 9803 Engineering Probability and Statistics
ENGR 9903 Engineering Probability and Statistics

Physics Courses
CHEM 1223 General Chemistry II

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 Educational Psych/Clinical Experience
^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.
- CONTINUED FROM PREVIOUS PAGE -

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 68-69 of the 2018-2019 catalog.