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

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

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

Students majoring in the Physical Science Education program are encouraged to complete the following courses in high school.

Two years of high school Algebra and one year of Trigonometry OR
MATH 1513  College Algebra AND
MATH 1593  Plane Trigonometry

Major Requirements

Science Education - Physical Science ....................... 65

Science Education Core ......................................................... 37

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 1114  General Physics I and Lab OR
PHY 2014  Physics for Science and Engineering I and Lab
PHY 1214  General Physics II and Lab OR
PHY 2114  Physics for Science and Engineering II and Lab

Earth Science ........................................................................ 4
Required course:
PHY 3014  Earth Science

Mathematics ........................................................................... 3
Required course:
STAT 2103  Introduction to Statistics for Sciences

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

Computer Science ................................................................... 3
Required course:
CMSC 1513  Beginning Programming

Science Education - Physical Science ................................. 28

Required courses ................................................................. 20
CHEM 2104  Quantitative Analysis and Lab
CHEM 3303  Organic Chemistry I
CHEM 3312  Organic Chemistry I Lab
CHEM 3403  Biochemistry I
CHEM 3442  Experimental Biochemistry
PHY 1304  Descriptive Astronomy
ENGR 1112  Introduction to Engineering and Lab

Elective Science .................................................................... 8
Select from the following:
CHEM 3323  Organic Chemistry II
CHEM 3332  Organic Chemistry II Laboratory
CHEM 3203  Introductory Physical Chemistry
*ENGR 2303  Electrical Science
*ENGR 2311  Electrical Science Lab
*ENGR 3403  Analog Electronics
*ENGR 3421  Analog Electronics Laboratory
PHY 4910  Seminar in Physics (1 - 3 hours)

* Students choosing to take PHY 1114 and PHY 1214 Gen Physics I & II can only take CHEM courses within the Elective Science due to prerequisites. To take Engineering courses, students must take PHY 2014 Physics for Science and Engineering I and Lab and PHY 2114 Physics for Science and Engineering II and Lab. PHY 2014 and 2114 have MATH 2313, 2323 and 2333 as prerequisites.

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

- CONTINUED ON NEXT PAGE -
Program: Science Education - continued

Major: Science Education - Physical Science

Degree: Bachelor of Science in Education (B.S.Ed.)

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<td>Contemporary Learning Sciences</td>
</tr>
<tr>
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<tr>
<td>PTE 4838</td>
<td>Internship/Student Teaching Secondary</td>
</tr>
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<td>PTE 4853</td>
<td>Classroom Management &amp; Instruction</td>
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</table>

^ Admission to Teacher Education required
# To be taken the same semester

Minimum Hours required …………………… 128*

*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.

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.