Program: Engineering Physics
Major: Engineering Physics - Electrical Systems
Degree: Bachelor of Science (B.S.)

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University Core (Total Listed 42-44)

Specific courses within the University Core are listed on pages 90-91.
• 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

Support Courses ................................................................. 9-19
PHIL 1123 Contemporary Moral Problems
ECON 1103 Introduction to Economics
FMKT 2323 Global Protocol and Diversity
(or Foreign Language)

Students majoring in the Engineering Physics program are encouraged to complete the following courses in high school.

One year of High School Algebra II and Trigonometry OR
MATH 1513 College Algebra AND
MATH 1593 Plane Trigonometry OR
MATH 1555 College Algebra and Trigonometry
One year of high school physics OR
PHY 1003 Introduction to Physics

Major Requirements

Engineering Physics - Electrical Systems .......... 93-94

Physics ................................................................................. 14
Required courses:
PHY 2014 Physics for Scientists and Engineers I and Lab
PHY 2114 Physics for Scientists and Engineers II and Lab
PHY 3103 Modern Physics
PHY 3883 Mathematical Physics I

Engineering ............................................................................. 54
Required courses:
ENGR 1112 Introduction to Engineering and Laboratory
ENGR 1213 Engineering Computing and Laboratory
ENGR 2033 Statics
ENGR 2043 Dynamics
ENGR 2303 Electrical Science
ENGR 2311 Electrical Science Laboratory
ENGR 3183 Electromagnetic Fields I
ENGR 3203 Thermodynamics
ENGR 3222 Digital Logic Design and Laboratory
ENGR 3302 Engineering Statistics and Experimentation
ENGR 3323 Signals and Systems & Laboratory
ENGR 3404 Analog Electronics and Laboratory

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

Mathematics ............................................................................. 14-15
Required courses:
MATH 2305 Accelerated Calculus 1 and 2 OR
MATH 2313 Calculus 1 AND
MATH 2323 Calculus 2
MATH 2333 Calculus 3
MATH 2343 Calculus 4
MATH 3103 Differential Equations

Chemistry .................................................................................. 5
Required courses:
CHEM 1315 Chemistry for Engineering and Lab

Engineering Electives ............................................................. 6
Select from the following:
ENGR 3263 Introduction to Engineering Optics
ENGR 3803 Electrical Power Systems
*ENGR 4183 Electromagnetic Fields II
ENGR 4303 Control Systems
*ENGR 4613 Photonics
*ENGR 4633 Intro to Solid State Devices

*Students in the Accelerated BS/MS program in Engineering Physics must enroll in the graduate level versions of this course, and must choose the 5000 level of either Photonics, Electromagnetic Fields II or Introduction to Solid State Devices as one of the engineering electives. Students need only three 5000-level courses as part of the accelerated program.

The number of credits needed to meet degree requirements exceeds 124 hours and will vary according to course selection.
Minimum Grade Requirements

1. Average in (a) all college course work, and (b) course work at UCO ................................................................. 2.00

2. A minimum grade of “C” must be earned in all courses in the major to count toward meeting degree requirements.

For other regulations pertaining to graduation, see pages 62-63 of the 2011-2012 catalog.