52

## PHYSICS / BACHELOR OF ARTS

Total Credit Hours: 120 Major Credit Hours: 52

This program provides students a solid foundation in physics. It gives students the opportunity to pursue other academic interests. The B.A. program can be excellent preparation for middle and high school physics teachers (see the B.A. Program for Physics Certification (https:// catalog.lewisu.edu/undergraduate/aviation-science-technology/physics/ physics-major-high-school-teaching-license-9-12-bachelor-arts/)), for pre-law students (especially for patent law), for students interested in graduate work in interdisciplinary areas like History or Philosophy of Science (with appropriate coursework in other fields), and for those interested in technical careers in industry.

## Requirements Degree Requirements

A grade of "C-" or better must be earned in a prerequisite course in order to advance to the next course in the sequence. An overall GPA of 2.0 must be earned in the major in order for a student to graduate with a B.A. in Physics.

Physics majors and minors may take a Physics class only two times. If a student has not achieved a minimum of a "C-" after the second attempt, the student may not repeat the class.

Core Courses     CHEM 11000     General Chemistry 1     A       CHEM 11100     General Chemistry 1 Lab     1       MATH 20900     Calculus 1     4       MATH 23500     Calculus 2     4       MATH 25000     Calculus 3     4       MATH 30000     Differential Equations     3       PHYS 21000     General Physics 1     3       PHYS 21100     General Physics 1 Lab     1       PHYS 21500     General Physics 2 Lab     1       PHYS 21600     General Physics 3 Lab     1       PHYS 21900     General Physics 3 Lab     1       PHYS 29600     Research Methods Seminar     1       PHYS 30000     Mechanics     4       PHYS 34100     Modern Physics Laboratory     3       PHYS 36500     Intermediate Physics Laboratory     3       PHYS 46500     Capstone Project     1       PHYS 31000     Electricity and Magnetism     4       or PHYS 31100     Halcettricity and Magnetism     4       or PHYS 31100     Analog and Digital Electronics     3  Select one of the	Code	Title	Hours
CHEM 11100General Chemistry 1 Lab1MATH 20900Calculus 14MATH 23500Calculus 24MATH 25000Calculus 34MATH 30000Differential Equations3PHYS 21000General Physics 13PHYS 21100General Physics 1 Lab1PHYS 21500General Physics 2 Lab1PHYS 21600General Physics 3 Lab1PHYS 21900General Physics 3 Lab1PHYS 21900General Physics 3 Lab1PHYS 21900General Physics 3 Lab1PHYS 21900General Physics 3 Lab1PHYS 29600Research Methods Seminar1PHYS 30000Mechanics4PHYS 34100Modern Physics Laboratory3PHYS 46500Capstone Project1PHYS 31000Electricity and Magnetism4or PHYS 31100Analog and Digital Electronics3Select one of the Following Computation courses:3CPSC 20000Introduction to Computer Science3DATA 23500Programming for Data Analysis1	Core Courses		
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PHYS 49600   Physics Seminar   1     PHYS 31000   Electricity and Magnetism   4     or PHYS 31100   Analog and Digital Electronics   3     Select one of the following Computation courses:   3     CPSC 20000   Introduction to Computer Science     DATA 23500   Programming for Data Analysis	PHYS 36500	Intermediate Physics Laboratory	3
PHYS 31000   Electricity and Magnetism   4     or PHYS 31100 Analog and Digital Electronics   3     Select one of the following Computation courses:   3     CPSC 20000   Introduction to Computer Science     DATA 23500   Programming for Data Analysis	PHYS 46500	Capstone Project	1
or PHYS 31100 Analog and Digital ElectronicsSelect one of the following Computation courses:3CPSC 20000Introduction to Computer ScienceDATA 23500Programming for Data Analysis	PHYS 49600	Physics Seminar	1
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CPSC 20000Introduction to Computer ScienceDATA 23500Programming for Data Analysis	or PHYS 3110	0 Analog and Digital Electronics	
DATA 23500 Programming for Data Analysis	Select one of the following Computation courses:		
	CPSC 20000	Introduction to Computer Science	
CPSC 31500 Scientific Computing	DATA 23500	Programming for Data Analysis	
	CPSC 31500	Scientific Computing	

MATH 36500 Mathematical Modeling

## **Total Hours**

## **Advanced Writing Requirement**

The Advanced Writing Requirement of the General Education Curriculum is satisfied by successful completion of PHYS 49600 Physics Seminar.