

# PHYSICS B.A.

## General Degree Requirements

To earn a baccalaureate degree, all students must complete successfully, in addition to any other requirements, the University of Montana General Education Requirements. Please refer to the General Education Requirements page (<https://catalog.umd.edu/academics/general-education-requirements/>) for more information.

Additional requirements for graduation can be found on the Degree/Certificate Requirements for Graduation page (<https://catalog.umd.edu/academics/graduation-requirements/>).

Unless otherwise noted in individual program requirements, a minimum grade point average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation. Please see the Academic Policies and Procedures page (<https://catalog.umd.edu/academics/policies-procedures/>) for information on how your GPA is calculated.

Courses taken to satisfy the requirements of a major, minor, or certificate program must be completed with a grade of C- or better unless a higher grade is noted in the program requirements.

## BACHELOR OF ARTS - PHYSICS

### Course Requirements

Code	Title	Hours
<b>Lower-Division Physics</b>		
Complete one of the following Physics sequences:		10
Algebra- and Trigonometry-based Physics:		
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
Calculus-based Physics (strongly recommended):		
PHSX 215N & PHSX 216N	Fundamentals of Physics with Calculus I and Physics Laboratory I with Calculus	
PHSX 217N & PHSX 218N	Fundamentals of Physics with Calculus II and Physics Laboratory II with Calculus	
<b>Upper-Division Physics</b>		
Complete all of the following courses:		
PHSX 301	Intro Theoretical Physics	3
PHSX 311	Oscillations and Waves	2
PHSX 320	Classical Mechanics	3
PHSX 323	Intermediate Physics Lab	3
PHSX 343	Modern Physics	3
PHSX 423	Electricity & Magnetism I	3
PHSX 444	Advanced Physics Lab	3
PHSX 461	Quantum Mechanics I	3
PHSX 499	Senior Capstone Seminar	1
Complete two of the following courses:		6
PHSX 425	Electricity & Magnetism II	
PHSX 446	Thermodynamics & Statistical Mechanics	
PHSX 462	Quantum Mechanics II	
<b>Physics Electives</b> <sup>1</sup>		
Complete two of the following courses:		6

PHSX 141N	Einstein's Relativity or ASTR 142 The Evolving Universe	
PHSX 327	Optics	
PHSX 330	Communicating Physics	
PHSX 333	Computational Physics	
PHSX 425	Electricity & Magnetism II or PHSX 446 Thermodynamics & Statistical Mechanics or PHSX 462 Quantum Mechanics II	
<b>Math Requirements</b> <sup>2</sup>		
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
<b>Computer Science Requirements</b>		
Complete one of the following courses:		
CSCI 150	Introduction to Computer Science	3
CSCI 151	Interdisciplinary Computer Science I	
PHSX 333	Computational Physics	
<b>Advanced Writing Requirement</b> <sup>3</sup>		
Complete the following course:		
PHSX 330	Communicating Physics	3
<b>Total Hours</b>		<b>68</b>

1

Other PHSX courses may be substituted with adviser approval.

2

M 412 and M 418 are also recommended.

3

Students may substitute another advanced writing course with the approval of the department chair.