

PHYSICS
Bachelor of Science
(B.S.) 2016-2017

Requirements for Major: At least 36 credit hours in the department, including:

PS 261 College Physics I & PS 262 College Physics II <u>or</u> PS 281 General Physics I & PS 282 General Physics II
PS 320 Electromagnetic Theory I
PS 330 Optics
PS 334 Thermodynamics
PS 335 Theoretical Mechanics I
PS 350 Modern Physics I
PS 360 Experimental Physics (2)
PS 365 Introduction to Theoretical Physics
PS 366 Introduction to Computational Physics

Upper-division laboratory courses – Select at least two from:

PS 322 Electrical Laboratory
PS 332 Optics Laboratory
PS 340 Electronics
PS 352 Atomic and Nuclear Physics Laboratory

Required minor – 30 credit hours:

The B.S. degree also requires a 30-hour minor to be chosen from the Natural Sciences (Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, or Computer Information Science). This minor must be in departments other than the major, and must have at least 20 hours in one department.

Notes:

All majors must pass a written (Major Field Test) examination

General Education Distribution Requirements (BS):

Humanities (9) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (9) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (9) (GENS) (Max 8 Hours or 2 Courses/Discipline)
Fine Arts (3)		Soc. Science 1 (3)		Natural Science 1 (3-5)
Humanities 2 (3)		Soc. Science 2 (3)		Natural Science 2 (3-5)
Humanities 3 (3)		Soc. Science 3 (3)		Natural Science 3 (3-5)

Core University/BS-Specific Requirements:

WU 101 (3)* C or Better		Natural Science Minor (30 – 20 in one Discipline)	
EN 101 (3) C or Better		Hours Outside Major (76)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= C Grade All Major and Correlated Courses	
		Total Hours (124)	

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

Sample 4-Year Schedule for Physics Major Bachelor of Science 124 Hours

Curriculum for students starting 2016-2017 Academic Year
Students starting in different academic years should contact their advisor.

Freshman			
Fall Semester		Spring Semester	
CH 151 – Fundamentals of Chemistry I	5	MA 152 – Calculus II	5
MA 151 – Calculus I	5	PS 281 – General Physics I	5
EN 101 – English Composition	3	CM 111 – Intro to Structured Programming	4
WU 101 – Washburn Experience	3		
TOTAL	16	TOTAL	14
Sophomore			
Fall Semester		Spring Semester	
MA 153 – Calculus III	3	MA 241 – Differential Equations	3
PS 282 – General Physics II	5	PS 334 - Thermodynamics	3
CM 244 – C Programming	3	PS 335 – Theoretical Mechanics I	3
AR/MU/TH General Education	3	Soc Sci General Education	3
Elective	3	Natural Science General Education	4
TOTAL	17	TOTAL	16
Junior			
Fall Semester		Spring Semester	
PS 320 – Electromagnetic Theory I	3	PS 321 – Electromagnetic Theory II	3
PS 365 – Intro to Theoretical Physics	3	PS 322 – Electrical Laboratory	2
PS 366 – Intro to Computational Physics	3	PS 336 – Theoretical Mechanics II	3
MA 301 – Linear Algebra	3	Humanities General Education	3
EN 300 – Advanced Composition	3	Soc Sci General Education	3
		Natural Science General Education	3
TOTAL	15	TOTAL	17
Senior			
Fall Semester		Spring Semester	
PS 330 - Optics	3	PS 340 - Electronics	3
PS 332 – Optics Laboratory	1	PS 351 – Modern Physics II	3
PS 350 – Modern Physics I	3	PS 352 – Atomic and Nuclear Physics	
PS 360 – Experimental Physics	1	Laboratory	1
MA 343 – Applied Statistics	3	PS 360 – Experimental Physics	1
Soc Sci General Education	3	Humanities General Education	3
		Natural Science General Education	4
TOTAL	14	TOTAL	15