



Four-Year Degree Plan: Bachelor of Science in Physics

Catalog Year: 2023-2024

**COLLEGE OF
LETTERS,
ARTS AND
SCIENCES**

This is a degree plan for completing a Bachelor of Science in Physics in eight semesters. This document is meant to be used as a guide for planning purposes only and is intended for use in consultation with a Professional Academic or Faculty advisor. **Students are responsible for consulting advisors and the [MSU Denver catalog](#) for degree requirements.**

Year One					
Semester 1			Semester 2		
Fall		Credits	Spring		Credits
PHY 2311	General Physics I	4	PHY 2331	General Physics II	4
PHY 2321	General Physics I Laboratory	1	PHY 2341	General Physics II Laboratory	1
MTH 2410	Calculus II	4	MTH 2420	Calculus III	4
ENG 1010	Composing Arguments	3	ENG 1020	Research and Argument Writing	3
--	Ethnic Studies & Social Justice	3	--	General Studies Elective	3
Semester 1 Total		15	Semester 2 Total		15

Year Two					
Semester 3			Semester 4		
Fall		Credits	Spring		Credits
PHY 2811	Modern Physics	4	PHY 2711	Vibr, Waves & Math Methods	4
PHY 2821	Sophomore Physics Laboratory	1	PHY 3011	Modern Physics II	3
MTH 3420	Differential Equations	4	PHY 3411	Thermal Physics	3
--	General Studies Elective	3	PHY 3711	Junior Physics Laboratory	2
--	General Studies Elective	3	--	General Studies Elective	3
Semester 3 Total		15	Semester 4 Total		15

Year Three					
Semester 5			Semester 6		
Fall		Credits	Spring		Credits
PHY 3211	Analytical Mechanics	4	PHY 3811	Quantum Physics	4
PHY 4331	Electricity and Magnetism	4	--	Senior Physics Elective**	3
PHY 4711	Senior Physics Laboratory	2	--	General Studies Elective	3
--	General Studies Elective	3	--	General Studies Elective	3
--	General Studies Elective	3	--	Minor Requirement	3
Semester 5 Total		16	Semester 6 Total		16

Year Four					
Semester 7			Semester 8		
Fall		Credits	Spring		Credits
--	Sr. Physics Elective*	3	PHY 4611	Computational Physics	3
--	General Studies Elective	3	PHY 4921	Physics Senior Seminar	1
--	Minor Requirements	6	--	Minor requirements	9
--	Unrestricted Elective	3			
Semester 7 Total		15	Semester 8 Total		13

Program Total: 120

Please Note: This program assumes MTH 1410- Calculus I as a prerequisite. Students must complete all courses with a grade of C- or better. This degree requires a minor in any field.

*Physics Laboratory II, Planetary Physics, Solid State Physics, Advanced Physics Laboratory II, Atomic and Molecular Physics, General Relativity

**Optics, Astronomical Techniques, Electricity and Magnetism II, Subatomic Physics, Astrophysics.

Detailed Course Listing		
General Studies		
--	General Studies Non-Natural and Phys Sci	27
--	General Studies Natural and Phys Sci	6
General Studies Total		33
Core Requirements		
MTH	Calculus I, II, III, and Differential Equations	16
PHY	General Physics I, II, and Labs	10
	Modern Physics I, II and Lab	8
	Vibrations, Waves, and MM	4
	Jr Core: Thermal, Anal, Quantum	11
	Upper-division Laboratories	4
	Sr Core: E&M, Computational, Senior Seminar	8
Core Requirements Total		61
Specific Degree Requirements		
--	Senior Electives	5
Specific Degree Requirements Total		5

Program Totals	
General Studies Requirements	33
Required Pre-Requisites	16
Major Courses	45
Concentration Courses	5
Unrestricted Electives	3
Minor	18
Total to Graduate	120