

Physics, B.S. 2023–24 Catalog

This example plan is designed to provide a blueprint for students to complete their degrees within four years. It includes recommended sequences of courses. Individual plans will vary based on previously earned credit, such as Dual Enrollment and AP credit, as well as the student's academic goals. Students will work with an academic advisor to develop a more individualized plan to complete their degree.

This example four-year plan is applicable to students admitted during the 2023–24 academic year.

Total credits required: 120 credits

Required GPA for graduation: 2.0 (institutional)

Students must maintain a 2.0 GPA in the courses used to fulfill Area F and major requirements.

Courses requiring a C or better are denoted with an asterisk (\*). Courses only offered in the fall semester are denoted with a plus sign (+). Courses only offered in the spring semester are denoted with a double-plus sign (++). Legend is available on the last page of this document.

Year 1							
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
PHYS 0001	First-Year Academic Seminar	1		ENGL 1102	English Composition II	3	А
ENGL 1101*	English Composition I (pre-req to ENGL 1102)	3	A	PHYS 2211 PHYS 2211L	Principles of Physics I & Lab (pre-reqs to PHYS 2212/2212L and 3005)	4	D
PHYS 1012	Techniques in Physics II	3	F	CHEM 1211K	Principles of Chemistry I & Lab	4	F
MATH 1261* GC1Y 1000	Calculus I (pre-req to MATH 1262, MATH 2150, and PHYS 2211/2211L) Critical Thinking (pre-req to GC2Y 2000)	4	F	MATH 1262*	Calculus II (pre-req to MATH 2263, PHYS 2212/2212L, and PHYS 3005)	4	D
	Semester Hours	14			Semester Hours	15	
Summer							
Notes:	Students may start with MATH 1113: Pre-Calculus before taking MATH 1261. In this case, students should also take PHYS 1011: Techniques in Physics I; these two classes together will fulfill the pre-requisites to PHYS 2211. Area A and GC1Y 1000 must be completed by 30 earned hours. First-Year Academic Seminar is a graduation requirement and impacts a student's GPA; however, it does not count toward the minimum of 120 semester hours required for a degree.						

	Year 2								
	Fall	Spring							
Course	Title	Hours	Area	Course	Title	Hours	Area		
PHYS 2920+	Sophomore Seminar	0	Major	MATH 4340	Differential Equations	3	Major		
PHYS 2212 PHYS 2212L	Principles of Physics II & Lab (pre-reqs to PHYS 3010, 3100, and 3100L)	4	F		Mechanics (pre-req to PHYS 4140)	3	Major		
MATH 2263*	Calculus III (pre-req to MATH 4340 and PHYS 3010, 3100, and 3321)	4	Major	PHYS 3100L++	Electronics Lab	1	Major		
MATH 2150	Linear Algebra (pre-req to PHYS 3321)	3	Major	GC2Y 2000	Global Perspectives	4	В		
Core Area C	Humanities & Ethics (student's choice)	3	С	Core Area C	Fine Arts (student's choice)	3	С		
Core Area E	Social Science (student's choice)	3	Е						
	Semester Hours	17			Semester Hours	14			
Notes:	GC2Y 2000 must be taken between	30–59 ea	arned ho	ours.					

Year 3							
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
PHYS 3920+	Physics Seminar I (pre-req to PHYS 4920)	0	Major	PHYS 4999	Research	1	Major
PHYS 3010+	Modern Physics (pre-req to PHYS 3140, 3321, and 4600L)	3	Major		Introduction to Quantum Physics (pre-req to PHYS 4321)	3	Major
PHYS 3100+	Electricity and Magnetism (pre-req to PHYS 4100)	3	Major	PHYS 4100++	Advanced Electricity & Magnetism	3	Major
PHYS 3600L+	Advanced Skills Lab	3	Major	PHYS 4600L++	Advanced Physics Lab	3	Major
Core Area E	Social Science (student's choice)	3	Ē	Core Area E	Social Science (student's choice)	3	E
Lang 1001	World Language I (1001-level)	3	Elective	Lang 1002	World Language II (1002-level)	3	Foreign Lang
	Semester Hours	15			Semester Hours	16	
Notes:	Notes: Students must complete a world language course at the 1002 level or higher. Complete the WebCAPE exam to determine placement for first course.						

Year 4							
	Fall	Spring					
Course	Title	Hours	Area	Course	Title	Hours	Area
PHYS 4999	Research	1	Major	PHYS 4999	Research	1	Major
PHYS 4321+	Advanced Quantum Physics	3	Major	PHYS 4920++	Senior Seminar	1	Major
PHYS 3140+	Thermodynamics (pre-req to PHYS 4140)	3	Major	PHYS 4140++	Statistical Mechanics	3	Major
STEM Course	Capstone course (see DegreeWorks for options)	3	Capstone	STEM Course	Capstone course (see DegreeWorks for options)	3	Capstone
Gen Elective	Any general elective course	3	Elective	STEM Course	Capstone course (see DegreeWorks for options)	3	Capstone
Gen Elective	Any general elective course	3	Elective	Gen Elective	Any general elective course	3	Elective
Semester Hours		16			Semester Hours	14	
Notes: General electives can be in any discipline and any level (1000–4999).							

	Legend						
Area	Area This section of the plan references the area of the curriculum the course fulfills.						
А	Core Area A: Essential Skills						
В	Core Area B: Institutional Options						
С	Core Area C: Humanities, Ethics, and Fine Arts						
D	Core Area D: Science, Technology, and Math						
E	Core Area E: Social Sciences						
F	Core Area F: Major Directed Core Requirements						
Major	Physics Major Requirements						
Capstone	ostone Physics Capstone Requirements: A culmination of everything the student has learned in the program.						
	Course(s) a student selects. Hours are needed to meet overall graduation hours. Number of electives varies per major.						
Elective Electives can be used towards GC Journeys, minors, or professional/graduate school pre-requisites, or to take							
	interest.						