

Physics Plus, BS



University of Wyoming, 2015-16

Students preparing for technical careers may select the Physics Plus curriculum. This plan enables students to concentrate in physics and an elected technical area with some sacrifice in the breadth of general education. Examples of an elected technical area include mathematics, engineering, biology, chemistry, computer science, geophysics, atmospheric science, economics, business, and technical writing.

Freshman Fall Semester			Hrs	Min	Grade	Notes
		USP First-Year Seminar	3		C	FY
CHEM	1020	General Chemistry I *	4			PN
MATH	2200	Calculus I ** ***	4		C	Q
PHYS	1310	College Physics I *** ^	4			Can substitute PHYS 1210 (Engineering Physics I).
Credit hours subtotal:			15			

Freshman Spring Semester			Hrs	Min	Grade	Notes
		USP Communication 1	3		C	C1
		USP Physical & Natural World	4			PN
MATH	2205	Calculus II ***	4		C	
PHYS	1320	College Physics II *** ^^	4			Can substitute PHYS 1220 (Engineering Physics II).
Credit hours subtotal:			15			

Sophomore Fall Semester			Hrs	Min	Grade	Notes
		USP Communication 2	3		C	C2
COSC	1010	Computer Science I	4			
MATH	2210	Calculus III ***	4		C	
PHYS	2310	College Physics III: Waves and Optics ***	4			Offered fall semester.
Credit hours subtotal:			15			

Sophomore Spring Semester			Hrs	Min	Grade	Notes
		USP Human Culture ****	3			H
		USP US & Wyoming Constitutions	3			V
PHYS	2320	College Physics IV: Modern Physics ***	3			Offered spring semester.
PHYS	4210	Classical Mechanics I	3			Offered spring semester.
		Elective from Secondary Area	3			
Credit hours subtotal:			15			

This is a guide for course work in the major; actual course sequence may vary by student. Please refer to the online student degree evaluation, and consult with an academic advisor. • Not all courses are offered every semester and some electives may have prerequisites. Students should review the course descriptions in the *University Catalog* and consult with their academic advisor to plan accordingly.

University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U. • University Studies Program (USP) Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

College of Arts and Sciences requirements:

Students must take two "core" courses in addition to the USP requirements: Diversity in the United States (ASD) and Global Awareness (ASG). • No more than 60 hours in the major subject may be used toward the 120 credit hours required for graduation. • At least 30 hours in the major subject must be completed with a grade of C or better (the major may require more).

Physics Plus BS Program Notes:

* Requires MATH ACT ≥ 23 , MATH SAT ≥ 600 , or Math Placement Exam ≥ 3 .

** Requires MATH ACT ≥ 27 , MATH SAT ≥ 600 , Math Placement Exam ≥ 5 , or $\geq C$ in MATH 1405 or 1450.

*** Not finishing this class in the listed semester may greatly delay degree completion.

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Junior Fall Semester			Hrs	Min Grade	Notes
USP Human Culture ****			3	H	
MATH	2310	Applied Differential Equations	3		
PHYS	4310	Quantum Mechanics I	3		Offered fall semester.
PHYS	4410	Electricity and Magnetism I	3		Offered fall semester.
Elective from Secondary Area			3		
Credit hours subtotal:			15		

Junior Spring Semester			Hrs	Min Grade	Notes
A&S Core Diversity in the US			3		ASD
PHYS	3650	Advanced Lab/Modern Physics & Electronics	4	C	C3; offered spring semester.
Upper Division Elective			3		Recommend PHYS 4350 (Advanced Quantum Mechanics - offered spring semester) or PHYS 4830 (Mathematical & Computational Physics I).
Upper Division Elective from Secondary Area			3		
Elective from Secondary Area			3		
Credit hours subtotal:			16		

Senior Fall Semester			Hrs	Min Grade	Notes
A&S Core Global Awareness			3		ASG
PHYS	4510	Thermodynamics and Statistical Mechanics	3		Offered fall semester.
Upper Division Elective			3		Recommend PHIL 3140 (Philosophy of Science); may take this semester or another based on course offering.
Upper Division Elective from Secondary Area			6		
Credit hours subtotal:			15		

Senior Spring Semester			Hrs	Min Grade	Notes
Upper Division Elective			3		Recommend PHYS 4350 (Advanced Quantum Mechanics - offered spring semester) or PHYS 4830 (Mathematical & Computational Physics I).
Upper Division Electives			6		
Upper Division Elective from Secondary Area			9		
Credit hours subtotal:			18		

TOTAL CREDIT HOURS: 124

Physics Plus BS Program Notes con't:

**** Students are strongly encouraged to enroll in Human Culture requirement courses that correspond to the College of Arts & Sciences Core required US Diversity (ASD) and Global Awareness (G) electives or else they will have to take separate ASD and ASG courses. A list of ASD & ASG courses that transfer is available.

^ For declared physics majors, the prerequisite of Math 2200 is waived and concurrent enrollment is approved.

^^ For declared physics majors, the prerequisite of Math 2205 is waived and concurrent enrollment is approved.

- If intending to apply to graduate school, take the physics GRE by fall semester of the senior year.

