# Astronomy, BS





Freshman Fall Semester	Hrs	Min Grade	Notes
USP First-Year Seminar	3	С	FY
USP Human Culture	3		Н
MATH 2200 Calculus I * **	4	С	Q
PHYS 1310 College Physics I ^ **	4		Can substitute PHYS 1210 (Engineering Physics I).
Credit	hours subtotal: 14		

Freshn	nan S	Spring Semester	r	Hrs	Min Grade	ade Notes	
		USP Communication 1		3	С	C1	
ASTR	2310	General Astronomy I **		4			
MATH	2205	Calculus II **		4	С		
PHYS	1320	College Physics II ^^ **		4		Can substitute PHYS 1220 (Engineering Physics II).	
			Credit hours subtotal:	15			

Sopho	more	Fall Semester	Hrs	Min Gra	de	Notes
		USP Communication 2	3	С	C2	
COSC	1010	Introduction to Computer Science I	4			
MATH	2210	Calculus III **	4			
PHYS	2310	Physics III: Waves and Optics **	4			
		Credit hours subtotal:	<u>15</u>			

Sopho	more	Spring Semester	Hrs	Min Grade	Notes
		A&S Core Diversity in the US	3	ASD	
ASTR	2320	General Astronomy II **	4	Offered	every other spring semester.
MATH	2250	Elementary Linear Algebra	3		
PHYS	2320	Physics IV: Modern Physics **	3		
PHYS	4210	Classical Mechanics I	3		
		Credit hours subtotal:	<u>16</u>		

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).

### **Astronomy Program Notes:**

- \* Requires MATH ACT  $\geq$  27, MATH SAT  $\geq$  600, Math Placement Exam  $\geq$  5 or  $\geq$  C in MATH 1405 or 1450.
- \*\* Not finishing this class in the listed semester may greatly delay degree completion.
- ^ For declared physics majors, the <u>prerequisite</u> of Math 2200 is waived and <u>concurrent enrollement</u> is approved.
- ^^ For declared physics majors, the <u>prerequisite</u> of Math 2205 is waived and <u>concurrent enrollment</u> is approved.
- If intending to apply to graduate school, plan to take the physics GRE by fall semester of the senior year.

# Astronomy, BS





Junior	Fall	Semester	Hrs	Min Grade	Notes
MATH	2310	Applied Differential Equations I	3		
PHYS	3640	Modern Electronics & Exper Technique	4		
PHYS	4310	Quantum Mechanics	3		
PHYS	4410	Electricity and Magnetism I	3		
		Upper Division Elective	3		Recommend PHYS 4830 (Mathematical & Computational Physics).
		Credit hours subtotal:	<u>16</u>		
Junior	Spri	ng Semester	Hrs	Min Grade	Notes
		USP US & Wyoming Constitutions	3		V
ASTR	4610	Introduction to Astrophysics	3		Can substitute another upper division elective.
PHYS	3650	Advanced Lab/Modern Physics & Electronics	4	С	C3
PHYS	4420	Electricity and Magnetism II	3		
PHYS	4840	Mathematical and Computational Physics II	3		Offered every other spring semester; can substitute another upper division elective.
		Credit hours subtotal:	<u>16</u>		
Senior	Fall	Semester	Hrs	Min Grade	Notes
Senior	Fall	Semester USP Human Culture	Hrs 3	Min Grade	Notes H
Senior	Fall	USP Human Culture USP Physical & Natural World		Min Grade	
Senior	Fall 4510	USP Human Culture	3	Min Grade	Н
		USP Human Culture USP Physical & Natural World	3	Min Grade	Н
		USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics	3 3 3	Min Grade	Н
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  ng Semester	3 3 3 6	Min Grade	Н
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:	3 3 3 6 15		H PN
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  ng Semester	3 3 6 15 Hrs		H PN Notes
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  ng Semester USP Physical & Natural World	3 3 6 15 Hrs		Notes  Notes  PN  ASG  Recommend PHYS 4350 (Advanced Quantum Mechanics).
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  ng Semester USP Physical & Natural World A&S Core Global Awarness	3 3 6 15 Hrs 3		Notes PN ASG
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  ng Semester USP Physical & Natural World A&S Core Global Awarness	3 3 6 15 Hrs 3		Notes  Notes  PN  ASG  Recommend PHYS 4350 (Advanced Quantum Mechanics).
PHYS	4510	USP Human Culture USP Physical & Natural World Thermodynamics and Statistical Mechanics Upper Division Electives Credit hours subtotal:  12 Semester USP Physical & Natural World A&S Core Global Awarness Upper Division Elective	3 3 6 15 Hrs 3 3		PN  Notes  PN  ASG  Recommend PHYS 4350 (Advanced Quantum Mechanics).  Recommend ASTR 4610 (Intro to Astrophysics) and/or PHYS 4840