

University of Wyoming Sample Four-Year Degree Plan
Catalog Year: 2019-20

Astronomy, BS



This sample degree plan is a guide, to be used for planning in consultation with your academic advisor. Actual course sequence may vary by student. A ▲ symbol identifies courses that must be taken and passed during the suggested semester in order for a student to stay on track toward completing the degree program within four years.

| Course Sequence | Course Prefix | Course Number | Course Title | Credit Hours | Min Grade | Notes |
|-----------------|---------------|---------------|--------------|--------------|-----------|-------|
|-----------------|---------------|---------------|--------------|--------------|-----------|-------|

Freshman Fall Semester

| | | | | | | |
|-------------------------------|------|------|------------------------------------|-----------|---|--|
| | | | USP First-Year Seminar | 3 | C | FY |
| | ASTR | 1050 | Survey of Astronomy | 4 | | |
| ▲ | MATH | 2200 | Calculus I ¹ | 4 | C | Q |
| ▲ | PHYS | 1210 | Engineering Physics I ² | 4 | | PN. Can substitute PHYS 1310 (College Physics I) |
| Credit hours subtotal: | | | | 15 | | |

Freshman Spring Semester

| | | | | | | |
|-------------------------------|------|------|-------------------------------------|-----------|---|---|
| | | | USP Communication 1 | 3 | C | C1 |
| ▲ | ASTR | 2310 | General Astronomy I | 4 | | Offered every other spring semester |
| ▲ | MATH | 2205 | Calculus II | 4 | C | |
| ▲ | PHYS | 1220 | Engineering Physics II ³ | 4 | | PN. Can substitute PHYS 1320 (College Physics II) |
| Credit hours subtotal: | | | | 15 | | |

Sophomore Fall Semester

| | | | | | | |
|-------------------------------|------|------|-------------------------------|-----------|---|-----------------------|
| | | | USP Communication 2 | 3 | C | C2 |
| | PHYS | 3000 | Methods of Physics | 4 | | |
| ▲ | MATH | 2210 | Calculus III | 4 | | |
| ▲ | PHYS | 2310 | Physics III: Waves and Optics | 4 | | Offered fall semester |
| Credit hours subtotal: | | | | 15 | | |

Sophomore Spring Semester

| | | | | | | |
|-------------------------------|------|------|------------------------------|-----------|--|--|
| | | | A&S Core Diversity in the US | 3 | | ASD |
| ▲ | ASTR | 2320 | General Astronomy II | 4 | | Offered every other spring semester. Can take before ASTR 2310 |
| | MATH | 2250 | Elementary Linear Algebra | 3 | | |
| ▲ | PHYS | 2320 | Physics IV: Modern Physics | 3 | | Offered spring semester |
| | PHYS | 4210 | Classical Mechanics I | 3 | | Offered spring semester |
| Credit hours subtotal: | | | | 16 | | |

This sample degree plan is a guide for course work in the major. • Course sequencing may need to be altered if ACT, SAT or Math Placement scores require a student to take pre-college courses before taking required math or English courses. • Not all courses are offered every semester and some electives may have prerequisites. Students should review 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 UW's University Studies Program 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).

Notes continued on next page(s).

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| Sequence | Course Prefix | Course Number | Course Title | Credit Hours | Min Grade | Notes |
|-------------------------------|---------------|---------------|---|--------------|-----------|--|
| Junior Fall Semester | | | | | | |
| | MATH | 2310 | Applied Differential Equations I | 3 | | |
| | PHYS | 3640 | Modern Electronics & Exper Technique | 4 | | Offered fall semester |
| | PHYS | 4310 | Quantum Mechanics | 3 | | Offered fall semester |
| | PHYS | 4410 | Electricity and Magnetism I | 3 | | Offered fall semester |
| | | | USP US & Wyoming Constitutions | 3 | | V |
| Credit hours subtotal: | | | | 16 | | |
| Junior Spring Semester | | | | | | |
| | ASTR | 4610 | Introduction to Astrophysics | 3 | | Offered every other spring semester |
| | PHYS | 3650 | Advanced Lab/Modern Physics & Electronics | 4 | C | C3. Offered spring semester |
| | PHYS | 4420 | Electricity and Magnetism II | 3 | | Offered spring semester |
| | PHYS | 4840 | Mathematical and Computational Physics II | 4 | | Offered every other spring semester |
| | | | Upper Division Elective | 3 | | Recommend PHYS 4830 (Mathematical & Computational Physics I) |
| Credit hours subtotal: | | | | 17 | | |
| Senior Fall Semester | | | | | | |
| | | | USP Human Culture [†] | 3 | | H |
| | | | Electives | 6 | | |
| | 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. |
| Credit hours subtotal: | | | | 15 | | |
| Senior Spring Semester | | | | | | |
| | | | Upper Division Elective | 3 | | Substitute PHYS 4840 if not taken spring of junior year |
| | | | A&S Core Global Awareness | 3 | | ASG |
| | | | USP Human Culture [†] | 3 | | H |
| | | | Upper Division Elective | 3 | | Recommend PHYS 4350 (Advanced Quantum Mechanics) |
| Credit hours subtotal: | | | | 12 | | |
| TOTAL CREDIT HOURS | | | | 121 | | |

Astronomy BS Program notes:

¹ See the "Prerequisite and MPE Cut Score Reference Chart" on the Math Placement website for the most up-to-date math placement equivalencies: <http://www.uwyo.edu/mathstats/math-placement/>.

² For declared physics/astronomy majors, the prerequisite of Math 2200 is waived and concurrent enrollment is approved.

³ For declared physics/astronomy majors, the prerequisite of Math 2205 is waived and concurrent enrollment is approved.

⁴ 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.

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