Requirements for Astronomy B.A. Degree

(Students starting in Fall 2023 and later)

This track is designed for students seeking careers in teaching, museum work, science writing, pre-med, etc. Majors in this track must develop a plan to complete course requirements with their advisor.

The requirements listed below are the Department major requirements only. In addition, to graduate you will need to satisfy the University General Education requirements and the College requirement for proficiency in a foreign language. Two of the general educations requirements (Junior Year Writing and Integrative Experience) are discipline specific and are summarized below.

Astronomy Courses:

ASTRON 191A: First Year Seminar (1 cr., Fall semester only)

ASTRON 228: Astrophysics I: Stars and Galaxies (3 cr., Spring semester only)

JUNIOR YEAR WRITING: Students whose primary major is astronomy should take **ASTRON 301:** Writing in Astronomy (3 credits, Fall semester only) to satisfy the Junior Year Writing requirement. Students whose primary major is not astronomy, only need take the junior year writing course offered in their primary major.

Either **ASTRON 335:** Astrophysics II: Stellar Structure and Evolution (4 cr, Fall semester only) or **ASTRON 452:** Astrophysics III: Galaxies and the Universe (4 cr., Spring semester only)

INTEGRATIVE EXPERIENCE: Students whose primary major is astronomy can take either **ASTRON 339:** Astronomy in a Global Context (3 credits, Spring semester only) or **PHYSICS 440:** Intermediate Lab (4 credits, Fall and Spring semesters) to satisfy the Integrative Experience requirement. Students whose primary major is not astronomy, only need to take the integrative experience course offered in their primary major.

Three additional Astronomy courses (each at least 3 credits), two at the 200+ level and one at the 300+ level. (independent study, practicum, honors project, honors thesis and honors research do not satisfy this requirement)

Some options for 200+ and 300+ Astronomy courses:

ASTRON 220: Special Topics in Astronomy (3 cr.)
ASTRON 223: Planetary Science (3 cr.)
ASTRON 226: Cosmology (3 cr.)

ASTRON 330: Topics in Astrophysics (3 cr.)
ASTRON 337: Techniques of Optical and Infrared Astronomy (4 cr., Fall semester)

Physics Courses:

PHYSICS 181: Physics I: Mechanics (4 cr., fall semester only)

PHYSICS 182: Physics II: Electricity and Magnetics (4 cr. Spring semester only)

PHYSICS 272: Physics III: Thermodynamics, Optics and Special Relativity (3 cr., Fall semester only) and **PHYSICS 273:** Sophomore Lab I (2 cr., Fall semester only)

PHYSICS 276: Physics IV: Introduction to Waves and Quantum Mechanics (3 cr., Spring semester only) and **PHYSICS 277:** Sophomore Lab II (2 cr., Spring semester only)

PHYSICS 281: Computational Physics (3 cr., both semesters)

Math Courses:

MATH 131: Calculus I (4 cr., both semesters)

MATH 132: Calculus II (4 cr., both semesters)

MATH 233: Multivariate Calculus (3 cr., both semesters)

Suggested Course Schedule:

Freshman Year: **Fall: ASTRON 191A, PHYS 181, MATH 131**
Spring: PHYS 182, MATH 132, ASTRON 228

Sophomore Year: **Fall: PHYS 272 and 273, MATH 233**
Spring: PHYS 276 and 277, PHYS 281
Fall or Spring: 200+ level astronomy elective

Junior/Senior Years: **Fall: ASTRON 301**
Spring: ASTRON 339
Fall or Spring: either ASTRON 335 (Fall) or 452 (Spring), 200+ level astronomy elective and 300+ level astronomy elective