

ASTRONOMY AND ASTROPHYSICS, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Description

The minor in Astronomy and Astrophysics, available at the University Park campus, provides educational options to students with interest in astronomy but with principal commitments to an allied field. It is designed principally for majors in Aerospace Engineering, Electrical Engineering, Engineering Sciences, Geosciences, Meteorology, and Physics. The educational objectives are to provide students with a profound understanding of the large-scale properties and processes in our Universe including planets and solar systems, our Sun and other stars, our Galaxy and other galaxies; and cosmology. Students in the minor survey the field in the 200-level sequence and then select from a choice of advanced astronomy and allied courses. Minors will be encouraged to take advantage of the many undergraduate research opportunities in the department, often using space-based observatories.

What is Astronomy and Astrophysics?

Astronomy and Astrophysics is the study of the fundamental problems of the nature and evolution of our Universe. Astronomy and Astrophysics includes topics ranging from the most distant and powerful objects in the universe, quasars and gamma ray bursts, to the origins of chemical elements in stars, to planets, both in our solar system and in orbit around other stars.

You Might Like This Program If...

- You enjoy applying the ideas of physics to the study of complex systems and phenomena found beyond the Earth.
- You want to study the answers to big questions relating to astronomy, such as 'how was the universe created?' and 'how likely is it that life exists outside the Earth?'
- You enjoy writing computer software to solve problems.
- You are interested in a minor astronomy and astrophysics to complement your major.

Program Requirements

Requirement	Credits
Requirements for the Minor	22-23

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
ASTRO 291	Astronomical Methods and the Solar System	3
ASTRO 292	Astronomy of the Distant Universe	3

PHYS 211	General Physics: Mechanics	4
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Additional Courses

Additional Courses: Require a grade of C or better

Select 6-7 credits of the following: 6-7

Additional ASTRO 400-level courses		
AERSP 308	Mechanics of Fluids	
AERSP 312	Aerodynamics II	
EE 472	Space Astronomy and Introduction to Space Science	
GEOSC 474	Astrobiology	
METEO 466	Planetary Atmospheres	
PHYS 458	Intermediate Optics	

Supporting Courses and Related Areas

Supporting Courses and Related Areas: Require a grade of C or better

Select 6 credits from 400-level ASTRO courses (except ASTRO 496) 6

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

University Park

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