Astronomy (ASTR)

Courses

ASTR 007 Introduction to Astronomy 3 Credits
Introduction to planetary, stellar, galactic, and extragalactic astronomy. An examination of the surface characteristics, atmospheres, and motions of planets and other bodies in our solar system. Properties of the sun, stars, and galaxies, including the birth and death of stars, stellar explosions, and the formation of stellar remnants such as white dwarfs, neutron stars, pulsars, and black holes. Quasars, cosmology, and the evolution of the universe. May not be taken by students who have previously completed ASTR 105, PHY 105, ASTR 301, PHY 301, ASTR 302 OR PHY 302.

Attribute/Distribution: NS

ASTR 008 Introduction to Astronomy Laboratory 1 Credit
Laboratory to accompany ASTR 007. Must be enrolled concurrently in ASTR 007.

Corequisites: ASTR 007

Attribute/Distribution: NS

ASTR 105 (PHY 105) Planetary Astronomy 4 Credits

Attribute/Distribution: NS

ASTR 110 (PHY 110) Methods of Observational Astronomy 1 Credit
Techniques of astronomical observation, data reduction, and analysis. Photometry, spectroscopy, CCD imaging, and interferometry. Computational analysis. Examination of ground-based and spacecraft instrumentation, and data transmission, reduction, and analysis.

Attribute/Distribution: NS

ASTR 300 Apprentice Teaching 3 Credits

ASTR 301 (PHY 301) Modern Astrophysics I 4 Credits

Prerequisites: (PHY 010 or PHY 011) and (PHY 013 or PHY 021) and (MATH 022 or MATH 096 or MATH 032 or MATH 052)

Attribute/Distribution: NS

ASTR 302 (PHY 302) Modern Astrophysics II 4 Credits

Prerequisites: (PHY 010 or PHY 011) and (PHY 013 or PHY 021) and (MATH 022 or MATH 032 or MATH 052)

Attribute/Distribution: NS

ASTR 332 (PHY 332) High-Energy Astrophysics 3 Credits
Observation and theory of X-ray and gamma-ray sources, quasars, pulsars, radio galaxies, neutron stars, black holes. Results from ultraviolet, X-ray and gamma-ray satellites.

Prerequisites: PHY 021 and (MATH 023 or MATH 033)

Can be taken Concurrently: MATH 023, MATH 033

Attribute/Distribution: NS

ASTR 342 (PHY 342) Relativity and Cosmology 3 Credits

Prerequisites: (PHY 021) and (MATH 023 or MATH 033)

Can be taken Concurrently: MATH 023, MATH 033

Attribute/Distribution: NS

ASTR 350 Topics in Astrophysics 3 Credits
For science or engineering majors who desire to study an active area of research in astrophysics. Individual supervision. May be repeated for credit with the consent of the program director.

Repeat Status: Course may be repeated.

Prerequisites: (ASTR 301 or PHY 301) and PHY 021 and (MATH 023 or MATH 033)

Attribute/Distribution: NS

ASTR 372 Special Topics in Astronomy 1-4 Credits
Selected topics not sufficiently covered in other courses.

Repeat Status: Course may be repeated.

ASTR 389 Honors Project 1-6 Credits
Repeat Status: Course may be repeated.

ASTR 472 Special Topics in Astronomy 1-4 Credits
Selected topics not sufficiently covered in other courses.

Repeat Status: Course may be repeated.