Astronomy (ASTR)

Courses

ASTR 2001L. Survey of the Universe Laboratory (ACTS Equivalency = PHSC 1204 Lab). 1 Hour.
Daytime and nighttime observing with telescopes and indoor exercises on selected topics. Pre- or Corequisite: ASTR 2003. (Typically offered: Fall, Spring and Summer)

ASTR 2001M. Honors Survey of the Universe Laboratory. 1 Hour.
An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the sun, normal stars and interstellar medium, birth and death of stars, neutron stars, and black holes. Pre- or Corequisite: ASTR 2003 or ASTR 2003H. (Typically offered: Fall)
This course is equivalent to ASTR 2001L.

ASTR 2003. Survey of the Universe (ACTS Equivalency = PHSC 1204 Lecture). 3 Hours.
An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the Sun, normal stars and interstellar medium, birth and death of stars, neutron stars, pulsars, black holes, the Galaxy, clusters of galaxies, and cosmology. Corequisite: ASTR 2001L or ASTR 2001M. (Typically offered: Fall, Spring and Summer)

ASTR 2003H. Honors Survey of the Universe. 3 Hours.
An introduction to the content and fundamental properties of the cosmos. Topics include planets and other objects of the solar system, the Sun, normal stars and interstellar medium, birth and death of stars, neutron stars, pulsars, black holes, the Galaxy, clusters of galaxies, and cosmology. Corequisite: ASTR 2001M. (Typically offered: Fall)
This course is equivalent to ASTR 2003.

ASTR 4033. Astrophysics I: Stars and Planetary Systems. 3 Hours.
An introduction to astrophysics covering stellar structure and evolution, the properties of the solar system, and extrasolar planetary systems. Prerequisite: PHYS 3613 or CHEM 3504. (Typically offered: Fall Odd Years)

ASTR 4043. Astrophysics II: Galaxies and the Large-Scale Universe. 3 Hours.
An introduction to astrophysics covering the interstellar medium, the Milky Way galaxy, extragalactic astronomy, and introduction to cosmology. Prerequisite: ASTR 4033. (Typically offered: Spring Even Years)

ASTR 4073. Cosmology. 3 Hours.
An introduction to modern Big Bang cosmology. The course covers the origin, evolution, and structure of the Universe, based on the Theory of Relativity. Prerequisite: PHYS 3613 or CHEM 3504. (Typically offered: Spring Odd Years)

ASTR 4083. Data Analysis and Computing in Astronomy. 3 Hours.
Study of the statistical analysis of large data sets that are prevalent in the physical sciences with an emphasis on astronomical data and problems. Includes computational lab 1 hour per week. Corequisite: Lab component. Prerequisite: PHYS 3613. (Typically offered: Fall Even Years)

ASTR 5033. Astrophysics I: Stars and Planetary Systems. 3 Hours.
An introduction to astrophysics covering stellar structure and evolution, the properties of the solar system, and extrasolar planetary systems. (Typically offered: Fall Odd Years)
This course is cross-listed with SPAC 5033.

ASTR 5043. Astrophysics II: Galaxies and the Large-Scale Universe. 3 Hours.
An introduction to astrophysics covering the interstellar medium, the Milky Way galaxy, extragalactic astronomy, and introduction to cosmology. Prerequisite: ASTR 5033 or SPAC 5033. (Typically offered: Spring Even Years)

ASTR 5073. Cosmology. 3 Hours.
An introduction to modern physical cosmology covering the origin, evolution, and structure of the Universe, based on the Theory of Relativity. (Typically offered: Spring Odd Years)

ASTR 5083. Data Analysis and Computing in Astronomy. 3 Hours.
Study of the statistical analysis of large data sets that are prevalent in the physical sciences with an emphasis on astronomical data and problems. Includes computational lab 1 hour per week. Corequisite: Lab component. (Typically offered: Fall Even Years)

ASTR 5523. Theory of Relativity. 3 Hours.
Conceptual and mathematical structure of the special and general theories of relativity with selected applications. Critical analysis of Newtonian mechanics; relativistic mechanics and electrodynamics; tensor analysis; continuous media; and gravitational theory. (Typically offered: Fall Even Years)