ASTRONOMY (ASTR)

Courses

ASTR 503 ASTROPHYSICAL TECHNIQUES (3)

Observational astronomy using the department's telescope and NASA archival data, emphasizing equipment operating principles, scientific methods, signal statistics, data reduction. Includes imaging and photometry with Charge-Coupled Devices in addition to spectroscopy, space observations, radio astronomy. Prerequisites: ASTR 161 and ASTR 162; and PHYS 212 (or PHYS 242 or PHYS 252).

ASTR 632 GALAXIES AND COSMOLOGY (3)

Stellar populations and the general properties of galaxies, including the Milky Way; galaxy formation and evolution; active galaxies; dark matter and dark energy; current topics in the study of the early universe; special and general relativity. Not open to students who have successfully completed ASTR 432.

ASTR 652 HIGH ENERGY ASTROPHYSICS (3)

An in-depth introduction to the physics of high energy phenomena in the universe at the graduate level, including emission from white dwarfs, neutron stars/black holes, supernova explosions/supernova remnants, active galactic nuclei and galaxy clusters. Introduction to high energy radiation from these phenomena, including X-ray absorption, synchrotron radiation, bremsstrahlung radiation and gamma-ray emission. Prerequisite: instructor consent.