ASTRONOMY AND ASTROPHYSICS

Course Search

Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.
More Info

Courses at the University of Florida, with the exception of specific foreign language courses and courses in the online Master of Arts in Mass Communication program, are taught in English.

Courses

AST 1002 Discovering the Universe **3 Credits**
An elementary, largely nonmathematical survey of our universe of stars, planets and galaxies. Acquaints the student with the development of astronomy as a human activity with how we know as well as what we know. Primarily for those not majoring in physical science or mathematics. (P)
General Education - Physical Science

AST 1022L Astronomy Laboratory **1 Credit**
Introduces experimental work in astronomy including scheduled laboratory exercises during the day in the teaching lab and evening observational astronomy at the on campus teaching observatory. (P)
General Education - Physical Science

AST 2000 Cosmology **3 Credits**
Overview of cosmology, the study of the large-scale structure and history of the universe, in four components: ideas about the universe as a whole predating the twentieth century; ideas from twentieth century physics that impact modern cosmology; stars, black holes, galaxies and quasars as probes of the universe; and the Hot Big Bang Model.
General Education - Physical Science

AST 2003 Introduction to the Solar System **3 Credits**
Survey of the solar system including the sun, planets, satellites, asteroids, meteorites and comets. (P)
Prereq: simple algebra
General Education - Physical Science

AST 2037 Life in the Universe **3 Credits**
The origin of life on Earth and the possibility of life elsewhere. A multidisciplinary approach is followed. Conditions for life to form and the likelihood that such conditions may exist elsewhere in the universe are discussed. Also considered are schemes proposed for the search for extraterrestrial intelligence (SETI). (P)
General Education - Physical Science

AST 3018 Astronomy and Astrophysics 1 **3 Credits**
First part of the AST 3018-3019 sequence. Survey of astronomy and astrophysics for physical science, engineering or mathematics majors. Course covers gravitation, orbits and tides; the Moon's phases and eclipses; light and spectra; the solar system; and a few historical milestones. (P)
Prereq: PHY 2048 and MAC 2311
Coreq: PHY 2049
General Education - Physical Science

AST 3019 Astronomy and Astrophysics 2 **3 Credits**
Second part of the AST 3018-3019 sequence. Stellar distance determination; spectral classification, magnitudes and the nature of color indices; binary stars; the interstellar medium; the Sun as a star; stellar interiors; star formation and stellar evolution; the structure of the Milky Way; the kinds of galaxies and their properties; groups, clusters and superclusters of galaxies; and cosmology. (P)
Prereq: PHY 2048 and MAC 2311
Coreq: PHY 2049
General Education - Physical Science

AST 3043 History of Astronomy through Newton **3 Credits**
Astronomy from its beginnings through Newton. Emphasis is on the works of Ptolemy, Copernicus, Kepler, Galileo and Newton. (H or P, and N)
General Education - Humanities
General Education - International
General Education - Physical Science

AST 3722C Techniques of Observational Astronomy 1 **3 Credits**
First part of the AST 3722C-4723C sequence. The fundamental principles and techniques used in planning, making, reducing and analyzing modern astronomical observations. Includes classroom lectures and discussion, indoor laboratory work, data analysis and outdoor night observations. Introduces numerical treatment of observations, CCD imaging, digital imaging processing and astronomical spectroscopy.
Coreq: AST 3018

AST 4211 Essentials of Astrophysics **3 Credits**
Foundation and background on topics in astrophysics, including broadening mechanisms of spectral lines, equations of state of gases, thermodynamics, radiation sources, radiative transport, kinetic theory of gases and stellar structure.
Prereq: AST 3018, AST 3019 and a working knowledge of calculus

AST 4300 Galactic Astronomy **3 Credits**
Intensive introduction to the fundamental properties of the Milky Way and its system of satellite galaxies. Course is intended for astronomy majors and natural science students. Topics include the ages, chemical abundances and kinematics of field stars and star clusters, the properties of the interstellar medium and its role in star formation, the dark matter content and models of the Milky Way's physical structure.
Prereq: AST 3018, AST 3019 and a working knowledge of calculus

AST 4402 Galaxies and Cosmology **3 Credits**
An investigation into the properties of galaxies and their distribution in space. Some cosmological implications of this distribution are discussed. Intended for astronomy majors and advanced students of other mathematical sciences.
Prereq: AST 3018, AST 3019 and a working knowledge of calculus

AST 4723C Techniques of Observational Astronomy 2 **3 Credits**
Second part of a sequence. The fundamental principles and techniques used in planning, making, reducing, and analyzing modern astronomical observations. Includes classroom lectures and discussion, indoor laboratory work, data analysis, and outdoor night observations. Introduces numerical treatment of observations, CCD imaging, digital imaging processing, and astronomical spectroscopy.
Prereq: AST 3722C

AST 4905 Individual Work **1-3 Credits**
Assigned reading or research for qualified undergraduates.
Prereq: AST 3018 and AST 3019, or two years of college physics and instructor permission

AST 4911 Undergraduate Research in Astronomy **3 Credits**
Course provides firsthand, supervised research in Astronomy. Projects may involve inquiry, design, investigation, scholarship, discovery or application in Astronomy.

AST 4930 Special Topics **1-3 Credits**
Lecture, seminar or laboratory sessions covering selected topics of current interest in astronomy.
Prereq: instructor permission