

ASTRONOMY (AST)

AST 100 Selected Topics (1-6 Credits)

Arts & Sciences

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

AST 101 Our Corner of the Universe (4 Credits)

Arts & Sciences

Historical and modern understanding of the nature of the solar system. Includes laboratory with observations. May be taken with AST 104 in either order or independently.

AST 104 Stars, Galaxies, & the Universe (4 Credits)

Arts & Sciences

Historical and modern understanding of the nature of the universe beyond the solar system. Includes laboratory with observations. May be taken with AST 101 in either order, or independently.

AST 180 International Course (1-12 Credits)

Arts & Sciences

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the SU academic department to assign the appropriate course level, title, and grade for the student's transcript.

Repeatable

AST 200 Selected Topics (1-6 Credits)

Arts & Sciences

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

Repeatable

AST 280 International Course (1-12 Credits)

Arts & Sciences

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.

Repeatable

AST 290 Independent Study (1-6 Credits)

Arts & Sciences

Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department.

Repeatable

AST 300 Selected Topics: Astronomy (1-6 Credits)

Arts & Sciences

Exploration of a topic (to be determined) not covered by the standard curriculum but of interest to faculty and students in a particular semester.

Repeatable

AST 312 Relativity, Black Holes, and the Big Bang (3 Credits)

Arts & Sciences

Cross-listed with PHY 312

Introduction to spacetime and relativity, cosmological redshift, binary systems, black holes, gravitational waves, and the Big Bang. No science prerequisite. For non-majors and majors.

AST 317 Modern Astrophysics (3 Credits)

Arts & Sciences

Cross-listed with PHY 317

A broad introduction to important and timely topics in astrophysics. Topics will include our local universe (the Sun and Moon), cosmology (the universe as a whole), star formation, stellar evolution, compact objects, black holes, multi-messenger astronomy and gravitational waves.

Prereq: PHY 211 or PHY 215 AP Physics C (Mech) exam score min 3

AST 319 Introduction to Astrobiology (3 Credits)

Arts & Sciences

Cross-listed with PHY 319

The emergence and development of life in the universe. Topics: elements of astrophysics, origin of life on earth, current research in astrobiology.

Prereq: MAT 285 or MAT 295 or AP MAT CALC AB EXAM SCORE MIN 3 or AP MAT CALC BC MIN SCORE 4

AST 380 International Course (1-12 Credits)

Arts & Sciences

Offered through SUAbroad by educational institution outside the United States. Student registers for the course at the foreign institution and is graded according to that institution's practice. SUAbroad works with the S.U. academic department to assign the appropriate course level, title, and grade for the student's transcript.

Repeatable 12 times for 12 credits maximum

AST 465 Methods in Astronomy and Astrophysics (4 Credits)

Arts & Sciences

Cross-listed with PHY 465

Mathematical and observational methods in astronomy, including coordinate systems, parallax and apparent magnitude, command line computing, spectra, focusing power, the diffraction limit, interferometric design, orbital motion and Keplerian dynamics, order-of-magnitude estimates and secular dynamics.

Prereq: ((PHY 212 OR PHY 216) AND (PHY 222 OR PHY 226)) OR AP PHYSICS C (ELEC & MAG) EXAM SCORE MIN 3

AST 490 Independent Study (1-6 Credits)

Arts & Sciences

Exploration of a problem, or problems, in depth. Individual independent study upon a plan submitted by the student. Admission by consent of supervising instructor(s) and the department.

Repeatable