

---

# ASTRONOMY

## ASTRONOMY COURSES

---

### ASTR 29 - Independent Study, Astronomy

#### 0.5 - 2 units

For course information, see "Independent Study". 27-108 hours lab. 27 hours laboratory. Transfer: CSU.

- Credit - Degree Applicable
- Grading Option: Letter Grade

### ASTR 30L - Introduction to Astronomy Laboratory

#### 1 units

Introduction to laboratory principles and techniques in astronomy. Includes: observational techniques such as naked eye, binocular, and telescopic identification of stars, planets, constellations, and deep sky objects; telescope operation and imaging; spectroscopy, motions of the sun, moon and planets. 54 hours laboratory. AA/AS GE: II. Transfer: CSU, UC; CSUGE: B3; IGETC: 5C.

**Prerequisite:** ASTR 31 with a minimum grade of C (May be taken concurrently) or ASTR 32 with a minimum grade of C (May be taken concurrently).

- Credit - Degree Applicable
- Grading Option: Letter or Pass/No Pass

### ASTR 31 - Introduction to Astronomy: The Solar System

#### 3 units

Introduction to history and physical principles of astronomy, focusing on our Solar System. Includes: constellations; distance scales; historical development of astronomy; gravitation; motion of the Earth, Moon, and Planets; astronomical tools; formation and evolution of the solar system; physical properties, atmosphere, and evolution of the Earth, Moon, and planets within the solar system; asteroids, comets, and other small bodies; discovery of extra-solar planets; possibilities for life beyond Earth. Designed for non-majors in mathematics or a physical science. A companion science lab, Astronomy 30L, is also available. 54 hours lecture. AA/AS GE: II. Transfer: CSU, UC; CSUGE: B1; IGETC: 5A.

- Credit - Degree Applicable
- Grading Option: Letter or Pass/No Pass

### ASTR 32 - Introduction to Astronomy: Stars and the Universe

#### 3 units

Introduction to the study of stars, galaxies, and cosmology. Includes the nature of light and matter, telescopes, spectroscopy, stellar formation and evolution, galaxies, quasars, and cosmology. Designed for non-majors in mathematics or a physical science. A companion science lab, Astronomy 30L, is also available. 54 hours lecture. AA/AS GE: II. Transfer: CSU, UC; CSUGE: B1; IGETC: 5A.

- Credit - Degree Applicable
- Grading Option: Letter or Pass/No Pass