

Astronomy (ASTR)

Astronomy (ASTR) Classes

ASTR 110 : Survey of Astronomy

Credits: 3

Class Hours: 3 lecture

Prerequisites: Qualified for MATH 100.

Description: This course is an introduction to the astronomical universe including planets, our Sun and Solar System, stars, galaxies, cosmology, and the universe. The focus is on the structure, evolution and dynamics of the physical universe and how properties of light can be used, for example, to determine distance, temperature, composition, and relative speed of nearby stars.

Semester Offered: Fall, Spring

Designation:

Diversification: Physical Sciences – DP

Course Student Learning Outcomes (CSLOs):

1. Describe, classify, and compare celestial objects (i.e. movement, spin, size, brightness, temperature, composition, energy, distance from Earth, etc.).
2. Explain fundamental physics concepts, astronomical principles and processes used to figure out the information in SLO#1 (for example, explain how scientists know the composition, temperature, and distance of celestial objects without direct sampling).
3. Describe the formation and fate of celestial objects (e.g. mainly stars but also Earth, other planets, moons, asteroids, comets, our solar system, galaxy, and universe).
4. Characterize the guiding principles of modern science.
5. Critically evaluate proposed explanations or ideas in astronomy.

ASTR 110L : Survey of Astronomy Laboratory

Credits: 1

Class Hours: 3 lab

Prerequisites: "C" or higher or concurrent enrollment in ASTR 110.

Comments: ASTR 110L is not required to enroll in ASTR 110.

Description: This course includes a demonstration of astronomical principles through laboratory observations and analysis of astronomical data.

Semester Offered: Fall, Spring

Designation:

Diversification: Lab (Science) – DY

Course Student Learning Outcomes (CSLOs):

1. Collect, report, and analyze data obtained in a laboratory and/or observatory setting in a manner exhibiting organization, proper documentation, and critical thinking.
2. Demonstrate a working knowledge of computer on-line astronomical programs.
3. Demonstrate a basic understanding of the use of standard astronomical instruments.
4. Apply the scientific method to a selected group of topics in astronomy.
5. Perform image analysis, especially as related to astronomical photographic data.