

Course Descriptions

Astronomy

ASTR 1014 The Solar System

The large-scale structure of the Universe and our place in it. The origin, evolution and general properties of planets, stars and galaxies are presented. (Meets general education Physical Science requirement.)

ASTR 1503 Observational Astronomy

Primarily web-based content. Study of planets, stars, galaxies, and nebulae through observation, image acquisition, and data processing using the NOC telescopes and instruments. Images of objects of interest are obtained utilizing telescopes at the NOC Observatory and with remotely-operated telescopes. Collaborative projects conducted with students in other colleges and universities and mentoring K-12 students may be required. Students may not receive credit for both ASTR 1514 and 1503.

ASTR 1523 Planetary Science

Origin and evolution of the solar system. Origin and characteristics of terrestrial planetary atmospheres. Characteristics of gas giant planets and ice moons, asteroids and comets. Discoveries and characteristics of extra-solar planetary systems. Aspects of colonization. Recommended preparation: ESCI 1214 or GEOL 1114

ASTR 1533 Search for Life

Topics include various strategies involved in the search for extraterrestrial life, the origin and evolution of planets and processes necessary for life to develop on planets. Also presented are strategies for interplanetary and interstellar travel and the exploration and colonization of space.

ASTR 2563 Galaxies and Cosmology

The origin of matter, energy, and forces in the early universe. Characteristics of various types of galaxies. The large-scale structure of the universe. General relativity and concepts of curved space are presented. Prerequisite: ASTR 1514 or ASTR 1503 or permission.

ASTR 2513 Observatory Methods

Techniques of using telescopes and astronomical instruments, astronomical data collection and processing. Concepts of optics, CCD imaging systems and procedures for photometry and spectroscopy are covered. A research project utilizing the NOC Observatory is required.