ASTRONOMY (ASTR)

ASTR 1013 The Solar System (N)
**Description:** Recent discoveries about the sun, planets, moons, asteroids, meteoroids, and comets; formation and future of the solar system; interplanetary travel, colonization, terraforming, and the search for extraterrestrial life. Offered in the fall semester. Previously offered as ASTR 1104 and ASTR 1014.

**Credit hours:** 3  
**Contact hours:** Lecture: 3  
**Levels:** Undergraduate  
**Schedule types:** Lecture  
**Department/School:** Physics  
**General Education and other Course Attributes:** Natural Sciences

ASTR 1023 Stars, Galaxies, Universe (N)
**Description:** Recent discoveries about the structure and life cycles of stars, galaxies and the universe; the search for extraterrestrial intelligence; interstellar travel, black holes, wormholes, and tachyons. Offered in the spring semester. Previously offered as ASTR 1024.

**Credit hours:** 3  
**Contact hours:** Lecture: 3  
**Levels:** Undergraduate  
**Schedule types:** Lecture  
**Department/School:** Physics  
**General Education and other Course Attributes:** Natural Sciences

ASTR 3023 Astrophysics
**Prerequisites:** PHYS 2114 or consent of instructor; ASTR 1023 recommended.
**Description:** Analysis and interpretation of astronomical phenomena in terms of the laws of physics; e.g. stellar structure, the interstellar medium, galaxies and cosmology.

**Credit hours:** 3  
**Contact hours:** Lecture: 3  
**Levels:** Undergraduate  
**Schedule types:** Lecture  
**Department/School:** Physics

ASTR 4010 Observatory Research
**Prerequisites:** PHYS 2114 and consent of instructor; ASTR 1013 or ASTR 1023 recommended.
**Description:** Team execution of multi-semester observing programs with electronic detectors at OSU's off-campus observatory. Introduction to digital image processing and analysis. Offered for variable credit, 1-2 credit hours, maximum of 8 credit hours.

**Credit hours:** 1-2  
**Contact hours:** Contact: 1-2 Other: 1-2  
**Levels:** Undergraduate  
**Schedule types:** Independent Study  
**Department/School:** Physics