**ASTR ASTRONOMY**

**ASTR 1000  INTRODUCTION TO THE UNIVERSE**
Credit Hour(s): 3.0

Introduction to the Universe. Three lecture hours a week. A survey of the universe, examining the historical origins of astronomy; the motions and physical properties of the Sun, Moon, and planets; the formation, evolution, and death of stars; and the structure of galaxies and the expansion of the universe.

**ASTR 1010  ASTRONOMY OF THE SOLAR SYSTEM**
Credit Hour(s): 4.0

Astronomy of the Solar System. Three lecture and two laboratory hours a week. Astronomy from early ideas of the cosmos to modern observational techniques. The solar system planets, satellites, and minor bodies. The origin and evolution of the solar system.

**ASTR 1020  STELLAR & GALACTIC ASTRONOMY**
Credit Hour(s): 4.0

Stellar and Galactic Astronomy. Prerequisite: Astr 1010 with grade of D or higher. Three lecture and two laboratory hours a week. The study of the Sun and stars, their physical properties and evolution, interstellar matter, star clusters, our galaxy and other galaxies, and the origin and evolution of the universe.

**ASTR 3010  TOPICS IN MODERN ASTRONOMY**
Credit Hour(s): 3.0

Topics in Modern Astronomy. Prerequisite: Astr 1020 with grade of D or higher, or equivalent. Three lecture hours a week. Pulsars, quasars, black holes, x-ray sources, UV astronomy, IR astronomy, radio galaxies, interstellar molecules, 3K background radiation, manned and unmanned planetary exploration.

**ASTR 3500  QUANTITATIVE ASTRONOMY**
Credit Hour(s): 4.0

Quantitative Astronomy. Prerequisite: Phys 2212K with grade of C or higher, or consent of instructor. Four lecture hours a week. An intermediate-level course that uses the tools of calculus-based physics to explore the properties of planets, stars, galaxies, and the Universe.

**ASTR 4000  FUNDAMENTALS OF ASTROPHYSICS**
Credit Hour(s): 3.0
Fundamentals of Astrophysics. Prerequisites: Phys 3401 with a grade of C or higher. Three lecture hours a week. Application of mechanics, electricity and magnetism, atomic and nuclear physics, and special relativity to the solution of astrophysical problems.

**ASTR 4010  ASTRONOMICAL METHODS LAB**

**Credit Hour(s):** 1.0

Astronomical Methods Laboratory. Prerequisite: consent of department. Three laboratory hours a week.

**ASTR 4100  ASTRO TECHNIQS/INSTRUMENTATION**

**Credit Hour(s):** 3.0

Astronomical Techniques and Instrumentation. Prerequisite: Phys 2212K with grade of C or higher, or consent of instructor. Three lecture hours a week. Fundamental and practical application of imaging, spectroscopy, photometry, astrometry, interferometry, and current developments in detector technology and telescope design.

**ASTR 4995  DIRECTED READINGS B.I.S.-CTW**

**Credit Hour(s):** 3.0 TO 4.0

Directed Readings B.I.S.-CTW. Directed Readings designed for Bachelor of Interdisciplinary Studies students. This course may satisfy the junior and/or senior-level Critical Thinking Through Writing requirements.