

Course # ASTR 106 Introduction to Astronomy

Credit Hours: 4

Scheduled hours per week

Lecture: 3

Lab: 2

Catalog Course Description: Introduction to the study of the Universe, including the latest theories on the origin of the Universe, the solar system, and Earth. Covered will be the origin of galaxies, stars, planets, asteroids, meteoroids, comets, etc., stressing modern techniques of gathering information about the Universe. The lab portion of the course will include observations of the sky, use of telescopes, and use of the celestial sphere and star charts. May also include planetarium visits and other astronomy related field trips. (3 lecture hours and 2 lab hours per week)

Pre-requisites: None

Co-requisites: ASTR 106L

Course Learning Outcomes (CLO):

- Ability to demonstrate critical thinking and apply the scientific method to a problem or idea.
- Ability demonstrate an understanding and analyze the fundamental principles, laws, and theories of Astronomy. Demonstrate a basic understanding of the universal laws that govern light and motions. The origin, composition, motion, and evolution of celestial bodies in the Universe and the energy relationships that explain their existence and evolution. Earth's origin, history, composition, and internal and external processes and that adaption to other celestial bodies.
- Capability to correctly make observations and/or take measurements and use scientific formulas for problem solving.
- Communicate results of scientific investigations, analyze data and formulate conclusions.
- Demonstrate a basic understanding of night sky observations and telescopes.
- Work safely and collaborate with peers to carry out the scientific method.

CLO Assessment Methods:

Direct: Exams, quizzes, presentations, research presentation, lab assignments, and prepared assignments.

Indirect Methods: Course Evaluations

Topics to be studied:

- The origin, composition, motion, and evolution of celestial bodies in the Universe and the energy relationships that explain their existence and evolution
- Origin and formation of the earth, solar system, and Universe.
- Patterns in the sky, celestial globes, and star charts
- Life cycle of a star
- Life in the universe
- The relationship of earth and the other planets in the solar system and exoplanets
- Exoplanets and habitable zones
- Early astronomers
- Basic physics
- Planets and satellites of the solar system

Relationship of Course to Program Learning Outcomes (PLO) or Institutional Learning Outcomes:

(For Program Courses, indicate outcomes taught in this course that relate to program outcomes) (For Foundational Learning or Reinforcement Learning Courses, indicate the approved Institutional Learning Category, the Institutional Learning Outcomes, and the related course outcomes)

Check if approved as: Foundational Learning Course Reinforcement Learning Course

Special requirements of the course:

N/A

Additional information:

N/A

Prepared by: Valerie Keinath

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