

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

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Revised by: Carl Sheperd
Revised by: Carl Sheperd
General Education criteria reviewed by: Carl Sheperd
General Education Outcomes reviewed by: Carl Sheperd
Status: Permanent

Date: December 4, 1991
Date: September 13, 1996
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Date: October 15, 1998
Date: March 23, 2001

A. Identification:

1. Subject Area: Physics
2. Course Number: PHY 180
3. Course Title: INTRODUCTION TO ASTRONOMY
4. Credit Hrs: 4
5. Catalog Description:

Motion and structure of the sun, planets, constellations, comets, asteroids, and meteors. Cosmic explosions, quasars, and stellar evolution including white dwarfs, neutron stars and black holes. Lab component requires numerous night observations. General Education: Lab Sciences. Three lecture; three lab.

GECC Course
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Student Outcomes list

B. Course Goals:

Introduce students to the science of astronomy. Become sufficiently familiar with the night sky to recognize the brighter stars, planets and constellations.

C. Course Outcomes:

Students will:

1. Compare the early historical ideas of astronomy with the modern theories of astronomy
2. Learn the basic characteristics of the sun, planets, moons and the minor members of the solar system
3. Discover the types of information gathered by planetary probes
4. Explain the general theories of the origin and evolution of the solar system
5. State the basic properties of electromagnetic radiation
6. Describe the basic methods involved in determining the distances, masses and sizes of stars
7. Describe the methods used by astronomers to measure and classify the brightness of stars
8. State the characteristics of gaseous nebulae, star clusters, and variable stars
9. Explain the theories involved in stellar energy generation and stellar evolution
10. State the characteristics of our galaxy and compare these with other galaxies
11. Discuss the current theories of the origin of the universe
12. Name and construct the hierarchy of objects in the observable universe

D. Course Outcomes Assessment:

Will include:

1. Comprehensive final exam
2. Lab practical: comprehensive knowledge of the sky.

D. Course Content:

Will include:

1. Historical Perspectives
2. Astronomical Observations
3. Moon, Sun and Planets
4. Asteroids, Meteors and Comets
5. Stars: composition, birth, evolution and death
6. Cosmology