

Common Course Outline

ASTM 101

Astronomy

3 Semester Hours

The Community College of Baltimore County

Description

Astronomy

Surveys astronomical observations and theories; emphasizes structure, configuration and evolution of planets, stars, galaxies and the universe.

3 credits: 3 lecture hours per week.

Prerequisites: LVE 2, LVR 2, LVM 2

Overall Course Objectives

Upon completion of this course the student will be able to:

1. use astronomical terms to describe the features and natures of astronomical objects. (I, 1)
2. describe, numerically and graphically, various presentations of astronomical data. (I, 1, 3)
3. incorporate astronomical information into effective written and oral communications. (II, 4)
4. apply mathematical methods to the interpretation of astronomical data. (III, 3)
5. use astronomical data and scientific methods, individually and collaboratively, to solve problems involving astronomical topics. (III, VI, 2, 4)
6. use observational instrumentation and/or computational equipment to research an astronomical topic. (III, VI, 6)
7. explain how results from various observational technologies are used to develop theoretical models of celestial objects. (IV, 5)
8. utilize the Internet and/or other informational resources to research astronomical topics. (IV, 6)
9. discuss how processes within the solar system affect the conditions for biological and social organization on Earth. (IV, V, 7)
10. examine the astronomical contributions made by people from diverse cultures over the course of prehistory and history. (V)
11. discuss the place of human life within the physical extent of the universe and within the sequence of cosmological processes. (V, 7)

Major Topics

Developments in Astronomy

Solar System

Stars

Galaxies

Universe

Course Requirements (VII)

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

- a minimum of 4 exams
- a minimum of 1 group activity requiring student collaboration. Since this course is offered in a variety of formats, this activity may be assessed in a number of ways, depending on the mode of delivery.
- a minimum of 4 written assignments, consisting of essays on exams, reports on supplemental reading, research papers, etc. The specific nature of the writing assignments will be determined by the instructor.

At least one graded activity will have an oral component. Since this course is offered in a variety of formats, this activity may be assessed in a number of ways, depending on the mode of delivery.

Other Course Information

This course is a general education core course and a science elective.

This course is also offered in self-paced, telecourse and World Wide Web formats.

This course together with ASTM 102, Astronomy Laboratory, fulfills a 4-credit General Education lecture and laboratory requirement in the Biological and Physical Sciences.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

Date Revised: 5/31/00