

# Common Course Outline

## ASTM 102

### Astronomy Laboratory

1 Credits

## Community College of Baltimore County

### Description

**ASTM 102 – Astronomy Laboratory** utilizes astronomical techniques and analyzes data regarding astronomical observations. It may require activities, such as telescope observing and field trips, outside of scheduled laboratory hours.

**1 Credits:** 2 laboratory hours

**Co-requisite:** Concurrent enrollment in or successful completion with a C or better of ASTM101

### Overall Course Objectives

Upon completion of this course students will be able to:

1. choose appropriate astronomical terms to refer to positions, motions and characteristics of celestial objects;
2. manipulate and present data numerically and graphically;
3. present astronomical information using effective written and/or oral communications;
4. use astronomical equipment (simulated or real) properly;
5. use observations of celestial objects to draw conclusions about their natures;
6. use astronomical data and scientific methods to solve problems involving astronomical topics;
7. explain how results from observational technologies are used to develop theoretical models of celestial objects;
8. find, evaluate, use, and document informational resources to research astronomical topics;
9. compare and contrast the roles that astronomical observational technologies have had within various cultures;
10. identify and utilize diverse skills to collaborate and accomplish group goals;
11. distinguish between principles related to astronomy that are evidence-based versus non-evidence based; and
12. evaluate professional behavior within the scientific community and explain the ramifications of misconduct.

### Major Topics

- I. Constellations
- II. Celestial Motions
- III. Astronomical Technology across the Globe
- IV. Solar System

- V. Stars and Star Systems
- VI. Galaxies

### **Course Requirements**

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

#### **Grading/exams:**

- A minimum of 2 exams
- A minimum of 11 laboratory exercises
- Attendance will be taken each class period as per college policy but no points will be rewarded solely for attendance. However, assignments may be given that can only be completed within a certain class period.
- The total extra credit given in this course can increase a student's percentage grade by no more than two percentage points.
- Multiple assessments will infuse CCBC General Education Program objectives.

**Written Assignments:** This companion lab supplements ASTM 101: Astronomy. ASTM 101 infuses the CCBC General Education Program Outcomes into the course. The formal assessment of those outcomes occurs in the requisite lecture course.

### **Other Course Information**

This course is an approved 1-credit General Education laboratory course in the Biological and Physical Sciences category. Successful completion of this course **and** the companion lecture course ASTM 101 fulfills the laboratory requirement and equals 4 credits. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.

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