

**ASTM 102**  
**Astronomy Laboratory**  
1 Credit (2 laboratory hours)

Community College of Baltimore County  
Common Course Outline

**Description**

**ASTM 102 – Astronomy Laboratory:** is a course in which students analyze astronomical data and engage with demonstrations to gain an understanding of how objects throughout the Universe behave.

**Pre-requisites:** MATH 082

**Co-requisites:** Concurrent enrollment in or successful completion of ASTM 101 with a C or better

**Overall Course Objectives**

Upon completion of this course, students will be able to:

1. describe the positions, motions, and characteristics of celestial objects using appropriate astronomical terminology;
2. present astronomical information using effective written and/or oral communications;
3. manipulate data numerically and graphically;
4. use astronomical equipment (simulated or real) properly;
5. use observations of celestial objects to draw conclusion about their nature;
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 cite academically appropriate informational resources used to research astronomical topics;
9. compare and contrast the roles that astronomical observational technologies have had within various cultures;
10. collaborate in diverse groups to 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 including the ramifications of misconduct.

**Major Topics**

- I. Celestial Motions
- II. Solar System
  - a. The Seasons
  - b. The Phases of the Moon
- III. Stars
- IV. Galaxies

The Common Course Outline (CCO) determines the essential nature of each course.  
For more information, see your professor's syllabus.

- V. Astronomical Technological across the Globe
  - a. Telescopes
  - b. Observational Research and Discoveries
- VI. The Universe

### **Course Requirements**

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- two exams
- 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.

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

### **Other Course Information**

This course is an approved 1-credit General Education course in the Biological and Physical Sciences and fulfills the laboratory requirement.

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