

CUMBERLAND COUNTY COLLEGE

Course: PI 107 Principles of Science I Laboratory

Credits: 3

Prerequisites: PI 106 must be taken either before or concurrently with PI 107

Description:

The Principles of Science I Laboratory supports PI 106, the 3 credit lecture section of Principles of Science I. The Laboratory section will provide experiments in selected topics in geology, astronomy, physics and chemistry to support the lecture section.

Learning Outcomes:

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

- Apply the scientific method and analyze a problem and draw conclusions from data and evidence.
- Describe and graph motion
- Demonstrate Newton's Laws of Motion.
- Illustrate momentum and the effects of impulse on momentum.
- Examine energy and demonstrate the conservation of energy.
- Compare physical and chemical properties and demonstrate changes of matter.
- Examine and describe the Earth's layers.
- Examine the composition and properties of rocks and minerals.
- Describe the solar system.

General Education Outcomes

- Use the scientific method of inquiry, through the acquisition of scientific knowledge.
- Use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Topical Outline

- Observation
- The Scientific Method
- Newton's First Law
- Projectile Motion
- Newton's Second Law: Effects of Force and Inertia
- Momentum: Impulse
- Elements of Chemistry: Qualitative Analysis
- Mixtures: Separation of a mixture
- Minerals and Their Uses: Identification of Minerals
- Rocks: Identification of Rocks
- The Dynamic Earth: Topographic Maps
- The Solar System: Planetary Motion

Text:

Conceptual Physical Science. Hewitt, P. G., Suchocki, J., Hewitt, L. A., Baird, D. 2004. Pearson Education Inc.

Academic Integrity:

Plagiarism is cheating. Plagiarism is presenting in written work, in public speaking, and in oral reports the ideas or exact words of someone else without proper documentation.

Whether the act of plagiarism is deliberate or accidental [ignorance of the proper rules for handling material is no excuse], plagiarism is, indeed, a “criminal” offense.

As such, a plagiarized paper or report automatically receives a grade of **ZERO** and the student may receive a grade of **F** for the semester at the discretion of the instructor.

Tutoring & Project Assist:

If you are having difficulty with work in this class tutoring is available through the Center for Academic & Student Success. If you think that you might have a learning disability, contact Project Assist at 856.691.8600 x 1282 for information on assistance that can be provided to eligible students.

Before Withdrawing From This Course:

If a student experiences adverse circumstances while enrolled in this course and considers withdrawing, s/he should see an advisor (division or advisement center) BEFORE withdrawing from the class. A withdrawal may cause harmful repercussions to completion rate standards and overall GPA, which can limit or eliminate future financial aid in addition to causing academic suspension.