



**Alabama  
Department of  
Postsecondary Education**

**Representing Alabama's Public Two-Year College System**

**PHY 120  
Introduction to Physics**

**I. PHY 120 Introduction to Physics - 4 Semester Hours**

**II. Course Description**

This course provides an introduction to general physics for non-science majors. Topics in fundamentals of mechanics, properties of matter, heat and temperature, simple harmonic motion, SHM, waves and sound, electricity and magnetism, optics and modern physics. Lab is required.

**III. Prerequisite**

MTH 098 or higher

**IV. Textbook**

Due to the varied selection of quality college level textbooks, each college will select the textbook needed to meet the requirements of this course.

**V. Course Objectives**

The student will be able to:

1. gain an understanding of the basic principles and concepts of physics presented.
2. appreciate applications of physics to the real world.
3. develop an aptitude for empiricism (the pursuit of knowledge through observation and experiment).

**VI. Course Outline of Topics**

1. Systems of measurement, conversion of units of measurement
2. Describing motion
3. Forces
4. Newton's Laws of Motion
5. Work and energy
6. Momentum
7. Projectile, circular, and planetary motions

8. Newton's Law of Gravity and earth satellites
9. Structure of matter
10. Solids, liquids and gases
11. Temperature and heat
12. Electric charges and electric current
13. Magnetism
14. Light
15. Atomic structure

Lab Topics:

1. "g" by free fall
2. Equilibrium
3. Torque
4. Weight lab, horsepower
5. Archimedes' principle
6. Specific heat – method of mixtures
7. Hooke's law
8. Ohm's law
9. Series and parallel circuits
10. Magnetic fields
11. Optics
12. Radiology

**VII. Evaluation and Assessment**

Grades will be given based upon A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, and F = below 60%.

**VIII. Attendance**

Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

**IX. Statement on Discrimination/Harassment**

The College and the Alabama State Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual's race, color, gender, religion, national origin, age, or disability. Such

harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

X. **Americans with Disabilities**

The Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act of 1990 state that qualified students with disabilities who meet the essential functions and academic requirements are entitled to reasonable accommodations. It is the student's responsibility to provide appropriate disability documentation to the College.