I. PHY 202 General Physics II – Trig Based – 4 Semester Hours

II. Course Description

This course is designed to cover general physics using college algebra and basic trigonometry. Specific topics include wave motion, sound, light optics, electrostatics, circuits, magnetism, and modern physics. Lab is required.

III. Prerequisite

PHY 201

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:

A. Gain an understanding of the basic principles and concepts of physics presented.
B. Appreciate applications of physics to the real world.
C. Develop techniques of problem solving.
D. Acquire knowledge to be used in future courses.
E. Develop an aptitude for empiricism (the pursuit of knowledge through observation and experiment)

VI. Course Outline of Topics

A. Waves (general, sound)
B. Electric fields
C. Electric potential
D. Capacitance
E. Circuits (simple, complex)
F. Magnetic fields
G. AC circuits
H. Light (electro-magnetic radiation, geometrical optics)
I. Selected topics from modern physics

Suggested Labs:

A. Waves on a string
B. Speed of sound
C. Plotting electric fields
D. Simple circuits
E. Resistor in series and parallel
F. Magnetic fields
G. Lenz’s Law
H. RC circuit
I. Plane and curved mirrors
J. Refraction and lenses
K. Diffraction
L. Radioactivity

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.

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