Administrative Unit: Science Department

Course Prefix and Number: PHYS 112L

Course Title: College Physics II Lab

Number of: Credit Hours: 2 Lecture Hours: 0 Laboratory Hours: 3

Catalog Description: Laboratory experiences to complement PHYS 112. Students majoring in Chemistry must earn a grade of C or better. Prerequisite: PHYS 111. Offered Spring, Summer.

Prerequisite(s)/Corequisite(s): PHYS 111.

Text(s): Most current editions of the following:


Course Objectives:

- To demonstrate basic laboratory techniques of measurement and experimentation.
- To illustrate and verify the principles learned in PHYS 112.

Measurable Learning Outcomes

- Utilize all skills from PHYS 111L.
- Measure temperature and heat.
- Determine density and buoyant force in fluids.
- Construct and analyze electrical circuits.
- Measure magnetic fields.
- Measure properties of light.

Topical Outline (major areas of coverage):

Experiments may include (but are not limited to):

- Speed of Sound in Air
- Archimedes’ Principle
- Specific Heats of Metals
- Ohm’s Law
- DC circuits
- Joule Heat
- The RC Time Constant
- Electromagnetic Induction
- AC circuits
- Earth’s Magnetic Field
- Spherical Mirrors and Lenses
- Wavelength of light

Material from this course may be tested on the Major Field Test (MFT) administered during the Culminating Experience course for the degree.
Recommended maximum class size for this course: 16

Library Resources: Online databases are available at http://www.ccis.edu/offices/library/resources.asp. You may access them from off-campus using your eServices login and password when prompted.

Prepared by: Frank Somer

Date: March 14, 2006

NOTE: The intention of the master syllabus is to provide an outline of the contents of this course, as specified by the faculty of Columbia College, regardless of who teaches the course, when it is taught or where it is taught. Faculty members teaching this course for Columbia College are expected to facilitate learning pursuant to the course objectives and cover the subjects listed in the topical outline. However, instructors are also encouraged to cover additional topics of interest so long as those topics are relevant to the course’s subject. The master syllabus is, therefore, prescriptive in nature but also allows for a diversity of individual approaches to course material.

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