

GEORGIA PERIMETER COLLEGE
DIVISION OF SCIENCE
COMMON COURSE OUTLINE
REVISION DATE: March 2005

COURSE ABBREVIATION	PHYS 2211L
CREDIT HOURS	1 Semester Hour
COURSE TITLE	PRINCIPLES OF PHYSICS I LAB
COREQUISITES	PHYS 2211

CATALOG DESCRIPTION

This is a laboratory to accompany PHYS 2211. Assignments are designed to complement and reinforce lecture concepts.

EXPECTED EDUCATIONAL RESULTS

As a result of completing this course, the student will be able to:

1. Perform basic measurements and collect data as are deemed appropriate by the experiments performed.
2. Graphically present and analyze data. Deduce valid conclusions from this analysis.
3. Analyze an experiment for sources of error and suggest possible corrections and improvements.
4. Write a lab report.
5. Discuss the theoretical basis of the performed experiments in the terms described by the corresponding complementary lecture.

GENERAL EDUCATION OUTCOMES

I. Communication Skills

Students develop reading skills by reading the laboratory manual and handout materials; their listening skills through pre-lab lectures; and writing skills through problem solving activities and laboratory report.

II. Problem Solving and Critical Thinking Skills

Students develop individual and group problem solving skills by solving problems both in the laboratory and at home; critical thinking skills are encouraged by requiring student response to questions on pre-lab and post-lab assignments.

III. Recognizing and Applying Scientific Inquiry

Students perform experiments to recognize the conceptual and physical models of phenomena. Data is collected, analyzed and compared with theories presented in lectures.

COURSE CONTENT

The following is a list of potential lab experiments. Individual campuses should choose experiments based on the available equipment and other factors. A minimum of 10 labs must be performed before any student can qualify to earn a grade for this course.

1. Basic Measurements and data analysis.
2. Addition of Vectors.
3. Uniformly Accelerated Motion.
4. Non-Conservative Forces and Friction.
5. Projectile motion and the Ballistic Pendulum.
6. Torques and Equilibrium.
7. Simple Harmonic Motion.
8. Conservation of Energy.
9. Thermal Expansion of Metals.
10. Specific Heats of Metals.
11. Heats of Fusion and Vaporization.
12. Standing waves on a String.
13. Resonance in Air Columns.

ASSESSMENT OF EXPECTED EDUCATIONAL RESULTS

The college believes in the academic value of giving final exams that are comprehensive in nature; however, the college also values the discretion of the faculty member to determine appropriate assessment methods. The departments on each campus and/or individual instructors will construct a detailed syllabus based on the Common Course Outline for implementation in each class.

The Common Course Outline offers only a schematic description of the course content and assessment material. Campus departments and/or individual instructors should elaborate upon and enhance these sections in their syllabi. At the beginning of each term, faculty members must submit their syllabi for approval to the department head and/or the discipline coordinating dean. The sequencing of topics as well as all readings and other assignments designed to assist the student in accomplishing course objectives are left to the discretion of the campus department and/or the individual instructor as long as these components adhere to the Common Course Outline.

EFFECTIVE DATE: March 2005

APPROVED DATE: March 2005