

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: PHSC 105L

Credit Hours: 1

Course Title: Elemental Physics Lab

Course Prerequisites: Previous credit or current registration in PHSC 105

Textbook: College Generated Laboratory Manual

Course Description:

Laboratory exercises that support and reinforce concepts taught in PHSC 105.

Learning Outcomes:

At the end of this course, the student will

- A. utilize physics laboratory instruments and techniques to perform experiments and measurements and to collect and evaluate results;
- B. demonstrate mathematical skills necessary to compute physical quantities in the physics laboratory; and
- C. integrate data collected through measurement, observation, and calculations to explain selected physics concepts.

To achieve the learning outcomes, the student will

- 1. demonstrate the meaning and importance of significant figures. (A,B,C)
- 2. represent measurement data in graphical form. (A,B,C)
- 3. use measurement instruments (A,B,C)
- 4. determine experimentally the density of an object. (A,B,C)
- 5. express how the distance traveled by an uniformly accelerated object changes with time. (A,B,C)
- 6. express how the velocity of a uniformly accelerated object changes with time. (A,B,C)
- 7. demonstrate the meanings of the variables (F, m, and a) in Newton's Second Law. (C)
- 8. demonstrate when linear momentum is conserved and what this means in terms of force and motion. (B,C)
- 9. demonstrate how work and energy are related. (B,C)
- 10. calculate work and power of an object. (B,C)
- 11. calculate the heat necessary to raise the temperature of a given mass of a substance. (B)
- 12. demonstrate the meaning of the specific heat of a substance. (B,C)
- 13. complete written lab summaries and questions to analyze, report, and apply experimental data. (A,B,C)

Course Requirements: To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum average of 60% on a minimum of 10 laboratory assignments
- minimum average of 70% on the mid-term and final test
- proficiency in the use of selected physics laboratory equipment to collect measurement data

Course Grading Scale:

- A- 90% or more of total possible points and meet the course requirements.
- B- 80% or more of total possible points and meet the course requirements.
- C- 70% or more of total possible points and meet the course requirements.
- D- 60% or more of total possible points or failure to meet one of the course requirements
- F- less than 60% of total possible points or failure to meet one of the course requirements

Attendance Policy: The college attendance policy is available at <http://catalog.bpcc.edu/content.php?catoid=5&navoid=369#class-attendance>

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, certification exams and/or clinical fees.

Nondiscrimination Statement

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COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist
Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111
318-678-6511
acao@bpcc.edu

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator
Teri Bashara, Director of Human Resources
Human Resources Office, A-105
6220 East Texas Street
Bossier City, LA 71111
Phone: 318-678-6056
Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Reviewed by K. McNamara (May 2022)