

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: PHYS 202L

Number of Credits: 1

Course Title: General Physics II Laboratory

Course Prerequisites: Previous or Current enrollment in PHYS 202

Textbook: College Generated Laboratory Manual

Course Description:

Laboratory exercises in electricity, magnetism, and light that support and reinforce PHYS 202 lecture. Withdrawal from lecture mandates withdrawal from laboratory. This course is only offered in the spring & summer.

Learning Outcomes:

At the end of this course, the student will

- A. utilize physics equipment to test, analyze, and quantify principles of electrical and light energy; and
- B. generate and interpret physics data to compose laboratory reports based on measurements, observations, calculations, and analysis.

To achieve the learning outcomes, the student will

1. explain Hooke's Law and how it relates to SHM. (A,B)
2. compute the speed of sound in a solid material. (A,B)
3. describe how a resonance tube can be used to measure the speed of sound in air or to determine the unknown frequency of a tuning fork. (A,B)
4. apply Ohm's law to obtain values of current or voltage in investigating a circuit resistance. (A,B)
5. describe the current-voltage relationship for resistances in series and parallel. (A,B)
6. describe how a capacitor charges and discharges through a resistor as a function of time. (A,B)
7. identify the magnetic field strength of magnets. (A,B)
8. describe the law of reflection and explain how it can be verified experimentally. (A,B)
9. determine the image characteristics for spherical mirror and lenses graphically using ray diagrams and analytically using the mirror equation and the thin-lens equation and magnification factor. (A,B)
10. calculate the wavelength of light from a diffraction pattern formed by laser light passing through a single slit. (A,B)

11. calculate the wavelength of light from a diffraction patterns formed by laser light passing through two slits. (A,B)
12. completion of written laboratory reports and questions. (A,B)

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.

- satisfactory completion of a minimum of 10 laboratory exercises
- minimum average of 70% on laboratory reports and tests

Course Grading Scale:

- A- 90% or more of total possible points and meet all course requirements
- B- 80% or more of total possible points and meet all course requirements
- C- 70% or more of total possible points and meet all course requirements
- D- 60% or more of total possible points and/or failed to meet one or more of the course requirements
- F- less than 60% of total possible points and/or failed to meet one or more 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
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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 C. Reed/ April 2021