

Louisiana Delta Community College

Academic Affairs Master Syllabus

Course Name: GENERAL PHYSICS I

Course Number: PHYS 210

Lecture hours: 3 **Lab Hours:** 0 **Credit Hours:** 3

Textbook, Author, and Publisher: To be provided by College Campus

Instructor Information: To be provided by College Campus

Class Location: To be provided by College Campus

Course Description:

This first semester of a two-semester course is an overview of basic concepts and principles of mechanics, heat, and sound. This course is intended for science majors.

Prerequisites: Successful completion of MATH 111, Plane Trigonometry, with a grade of C or better.

Co-requisites: Concurrent enrollment in PHYS 211, General Physics I Lab.

Learning Outcomes:

On completion of this course, the student will be able to:

1. Use SI (metric) units to express the measurements of physical quantities
2. Add and subtract vectors by graphical and component methods
3. Define and apply formulas involving speed, velocity, and acceleration
4. Use motion graphs to determine position, velocity, and acceleration
5. Define force; state and apply Newton's Laws of Motion and the Law of Universal Gravitation
6. Describe forces in fluids; state and apply Pascal's Principle, Archimedes' Principle and Bernoulli
7. Define work, energy and power
8. Identify the forms of energy and apply the Law of Conservation of Energy
9. Define momentum and apply the Law of Conservation of Momentum
10. Calculate formulas involving rotational motion
11. Define torque and moment of inertia and state the relationship between torque, moment of inertia, and angular acceleration
12. Define and calculate the location of the center of mass and center of gravity
13. State the conditions for static equilibrium and create free-body diagrams
14. Define stress and strain
15. Explain the difference between heat and temperature
16. State the methods of transfer of thermal energy
17. Identify the physical properties that affect the thermal expansion of an object.
18. Define Simple harmonic motion and identify objects which exhibit SHM
19. State the characteristics of a wave and list different types of waves
20. State the characteristics of sound and how sound is propagated
21. Define the intensity, and identify sources, of sound

Assessment Measures: To be provided by College Campus

Library Resource Center:

The Delta Library and Learning Resource Center is committed to providing quality information and learning resources and services, including technology, in supporting the overall mission of Delta Community College and its commitment to lifelong learning.

Special Accommodations:

Louisiana Delta Community College complies with Section 504 of the Rehabilitation Act, as well as the Americans with Disabilities Act. Students with disabilities who attend the Monroe campus may make a request by contacting the Director of Counseling and Disability Services (See College Directory for contact information.) at the beginning of each semester. Reasonable accommodations will be attempted for students with documented disabilities. If an impairment is identified later in the semester, a non-retroactive accommodation plan will be developed. Students at satellite campuses should contact the Coordinator of Student Affairs at their particular campus.

Title IX:

Louisiana Delta Community College is committed to protecting the rights of students, which includes compliance with Title IX requirements. As such, the institution and members of our community will not tolerate the offenses of dating violence, domestic violence, sexual assault, and stalking. Students with Title IX concerns should contact the College's Title IX Coordinator (See College Directory for contact information.) Students are required to complete Sexual Assault Awareness and Prevention Online Training. Access to this online course will be sent out through the Delta email account.

Student Code of Conduct:

Louisiana Delta Community College encourages an environment of academic integrity and mutual respect. Students should read and follow both academic and behavioral expectations identified in the Code of Student Conduct that can be found online at www.ladelta.edu. Students are expected to act with integrity, respect the rights of others, and conduct themselves in a professional manner. The Honor Code prohibits academic misconduct such as cheating, engaging in unauthorized collaboration, and plagiarism. Violations of the Code of Student Conduct may result in disciplinary action as provided in the Code. Incidents are reported through the online Student Conduct system.