

Southeastern University
College of Natural & Health Sciences
Department of Natural Sciences
PHYS 2533 - General Physics I
Official Syllabus

Catalog Description

This course is an introduction to the physics of mechanics, heat, electricity, wave motion, and optics.

Prerequisite: MATH 1413 or math placement exam
Corequisite: PHYS 253L

Credit Hours: 3

Repeatable: Course not repeatable

Intended Learning Outcomes

Students who successfully complete this course will:

1. Integrate force, velocity, acceleration, and displacement to analyze and describe the motion of an object.
2. Describe circular motion, demonstrating an understanding of its fundamental principles.
3. Explain the law of universal gravitation and apply it to describe gravitational interactions between objects.
4. Explain the relationship between work and energy and explain how they are related in the context of physical systems.
5. Describe the motion of objects in terms of momentum and analyze how momentum changes in different situations.
6. Apply conservation laws to predict changes in velocity, momentum, and energy in various physical scenarios.
7. Describe the forces involved in rotational motion, demonstrating an ability to analyze the dynamics of rotating objects.

Version History

02/24/2004 v1.0 Original course proposal.

10/27/2009 v2.0 Course description and ILOs revised.

11/14/2023 v3.0 Updated.

07/28/2025 v4.0 Update ILOs