Syllabus

PHY 152 - University Physics II

General Information

**Date** January 10th, 2023
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**Department** Science and Technology
**Course Prefix** PHY
**Course Number** 152
**Course Title** University Physics II

Course Information

**Catalog Description**  Second semester of a two-semester sequence suitable for transfer students pursuing degrees in engineering, computer science, physics, or professional programs which require calculus-based physics. Topics include oscillations and waves, electricity, magnetism, AC and DC circuits, optics, and limited topics in thermodynamics.

**Credit Hours** 4
**Lecture Contact Hours** 3
**Lab Contact Hours** 2
**Other Contact Hours** 1
**Grading Scheme** Letter

Prerequisites

MAT 272 with a C or better and PHY 151 with a C or better

Co-requisites

None
First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category
Natural Sciences (and Scientific Reasoning)

FLCC Values

Institutional Learning Outcomes Addressed by the Course
Inquiry, Perseverance, and Interconnectedness

Course Learning Outcomes

Course Learning Outcomes

1. Apply basic physical principles to the study of oscillators, waves, electric charges, electrical circuits, magnetic systems, and thermodynamic systems.

2. Make and analyze measurements of physical phenomena, applying the proper use of units, dimensions, statistics, uncertainty, graphing, and calculation.

3. Apply arithmetic, algebraic, geometric and Calculus principles to the analysis of oscillators, waves, electric charges, electrical circuits, magnetic systems, and thermodynamic systems.

4. Connect physics to other sciences, the arts, and everyday life.

Outline of Topics Covered

Oscillations
  - Spring-Mass Systems
  - Pendulums
  - Driven Oscillators
  - Resonance
  - Damped Oscillators

Waves
  - Transverse and Longitudinal Waves
  - Wave Superposition
  - Standing Waves on Strings

Sound