

PHYS 274 : General Physics III

This course focuses on the study of physical optics, special relativity, quantum mechanics, solid state physics, atomic and nuclear physics, and elementary particle physics.

Credits 3

Lecture Hours 3

Designation

DP

Prerequisites

Credit for PHYS 272 and PHYS 272L, and credit for or registration in MATH 243 (formerly MATH 231), or consent of instructor.

Course Outcomes

- Describe the theory of special relativity and its effects: time dilation and space contraction.
- Describe the particle like properties of electromagnetic radiation as demonstrated in the photoelectric effect and Compton scattering.
- Analyze the wavelike properties of matter known as quantum theory.
- Identify and Describe knowledge of the different properties of solids such as crystal structure, thermal and magnetic properties, and superconductivity.
- Describe nuclear structure, radioactive decay, nuclear interactions, and their applications.
- Identify the different elementary particles and describe their role in the forces that hold matter together.