Nebraska Wesleyan University

PHYS 2400 Introduction to Modern Physics

Catalog

2025-2026

Course Description

An introduction to modern physics: the post-Newtonian developments of quantum mechanics and Einsteinian relativity, with focus on special relativity, the atomic and nuclear structure of matter, and the foundations of quantum physics. Principles of modern physics will be approached through the contexts of the historical developments and classic experiments that brought them to light. The laboratory experience incorporates experiments and computer-based investigations, with emphasis on the development of laboratory skills including detectors and measurement techniques, laboratory journaling, data analysis, and reporting of results. Practical aspects of nuclear radiation detection and safety will also be covered.
Three lectures per week.
One laboratory per week.
Prerequisite(s): PHYS 1700 Principles of Physics II or PHYS 2100 General Physics II, and MATH 1610 Calculus II or permission of the instructor.
(Normally offered each spring semester.)

Course Hours

4 hours

Departments

1. Physics