Metropolitan State University

PHYS 355 : Modern Physics

A. Course Description

Credits: 3

Prerequisites: MATH 211 Calculus II AND PHYS 212 Calculus Based Physics II

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

This course covers special relativity, elementary quantum theory, atomic structure and spectra. It is intended for students pursuing chemistry and physics major/minor.

B. Course Effective Dates: 01/09/2017 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Know the fundamentals of special relativity and quantum theory
2. Can apply these theories to quantum systems including atoms
3. Understand atomic electronic structure and spectra
4. Can solve Schrodinger equation with boundary conditions for basic quantum systems

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

Note: Must be taken concurrently with PHYS 357 Modern Physics Lab except by instructor permission. First day attendance required except by instructor permission.