PHYS 3103: University Physics III

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 0
Lab Hours/Week: 0
OJT Hours/Week: *. *
Prerequisites: None
Corequisites: None
MnTC Goals: None

Final course of a calculus-based introductory physics sequence, with a focus on modern physics. Topics include special relativity, quantum mechanics, atomic physics and radiation, elementary particles, astrophysics, and cosmology. Includes lecture and laboratory. Prerequisite(s): PHYS 2102 or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/01/2024 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Relativity
2. Quantum mechanics
3. Atoms
4. Nuclear physics
5. Spectroscopy
6. Elementary particles
7. Cosmology

D. LEARNING OUTCOMES (General)

1. articulate and explain, in their own words, the key concepts of modern physics.
2. perform calculations for systems including relativistic particles, atoms and nuclei, photons, molecules, and subatomic particles.
3. carry out experimental investigations of modern physics topics and describe their results in a clear and concise report.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted