PHY 333L
Modern Physics Laboratory

Course Description

This is the laboratory course to accompany Modern Physics (PHY 333). Class is one hour credit and meets three hours per week.

Course Corequisite

Modern Physics (PHY 333)

Specific Course Requirements

Textbook Requirements

See current semester textbook list at http://www.physics.sfasu.edu/docs/books.pdf

Course Objectives

Investigate some of the classic experiments in twentieth century physics that contributed to changing our world view from Newtonian physics to quantum mechanics and relativity

Student Learning Outcomes

By the end of the course, a successful student will be able to:

- Demonstrate ability to work effectively with laboratory partners in a team.
- Demonstrate effective writing skills through written laboratory reports.
- Demonstrate good experimental technique in the laboratory by following directions and properly using the equipment in performing the experiments.

Course Content

- Statistics
- Absorption of Radiation
- Electrostatic Deflection
- Blackbody Radiation
- Electron and X-ray Diffraction
- Eigenvalue Problem
- Critical Potentials

Course Assessment

The lecture and laboratory grades are computed into one grade, and the same grade is recorded for both lecture and laboratory. Three lecture exams count as 25% of the overall grade. A comprehensive final exam counts as 25% and homework assignments count as 25% of the overall grade. Lab experiment grades count as 25% of a student's overall grade.