PHYS 1111L: Introductory Physics Laboratory I

1 Credit Hours

Corequisite: PHYS 1111

PHYS 1111L is an introductory laboratory for the trigonometry-based course on classical mechanics, thermodynamics, and waves. The student will be able to apply Newton's laws and conservation of energy and momentum to various problems in the laboratory, and perform measurements of simple harmonic motion, oscillations, waves, temperature, and basic fluid dynamics. The analysis of sources of error and formal propagation of uncertainties will also be developed.

PHYS 1112: Introductory Physics II

3 Credit Hours

Prerequisite: (PHYS 1111 or PHYS 2211) and (MATH 1113 or MATH 1190 or MATH 1179)

This course is an introductory algebra and trigonometry-based course on electromagnetism, optics, and modern physics. The student will be able to apply the concepts of electric field and electric potential to problems in electrostatics and with electric currents, describe the motion of charged particles in magnetic fields and induction, explain the origin of electromagnetic waves and properties of light, and understand elementary principles of special relativity and quantum physics.

PHYS 1112L: Introductory Physics Laboratory II

1 Credit Hours

Corequisite: PHYS 1112

PHYS 1112L is an introductory laboratory for the trigonometry-based course on electromagnetism, optics, and modern physics. The student will be able to apply the concepts of electric field and electric currents to problems in the laboratory, and perform measurements on magnetic fields and induction, optics, and elementary quantum physics phenomena. The analysis of sources of error and formal propagation of uncertainties will also be developed, along with graphical techniques and least-squares fits.