

PHYSICS 210 L
INTRODUCTORY PHYSICS LABORATORY II
(0.2; 1 credit)

Textbook: Physics 210 L Laboratory Manual
Physics Department

This laboratory manual contains fourteen experiments, twelve experiments must be performed by the Physics 210L students in one single semester. The laboratory experiments have been updated to include new developments in the laboratory physics and its pedagogy. We have introduced some interfaced experiment so that student will be able to conduct experiment and collect data using computers. The *PASCO* science workshop software, interface and sensors allow students to make measurements accurately and rapidly, and to display, analyze and manipulate data quickly and easily.

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Experiment

- I. Introduction*
- II. Surface tension*
- III. Viscosity*
- IV. Gas Thermometer*
- V. Mechanical equivalent of heat*
- VI. Boyle's Law*
- VII. Adiabatic compression of gases (measurement of γ of air and fuel gas)*
- VIII. Thermal expansion*
- IX. Standing Waves on a stretched String*
- XI. Standing Waves in air columns*
- XII. Geometrical optics: Law of refraction & Prism, Mirrors and Lenses*
- XIII. Interference and diffraction*
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