



Online Labs for Physics

Online Labs for Physics is a fully-online lab experience that can be used as an in-person lab replacement, preparation, supplement or make-up lab to bridge the gap between lab and lecture. These simulations help a student learn the practical and conceptual skills needed, then check for understanding and provide feedback. With pre-lab and post-lab assessment available and editable, instructors can customize each assignment within Connect®. Labs have been designed for Algebra- and Calculus-Based Physics.

Mechanics
Free Fall
Trajectory
Inclined Plane
Friction Force
Terminal Velocity
Kinetic and Potential Energy
Collisions in One Dimension
Collisions in Two Dimensions
Rotation, Moment of Inertia
Harmonic Oscillation
Damped Oscillation
Coupled Oscillators
Uniform Circular Motion— <i>In Development</i>
Analyze Your Own Video— <i>In Development</i>

Thermodynamics
Calorimetry— <i>In Development</i>

Electricity and Magnetism
Batteries, Resistors, and Currents
Charging Capacitor
Wheatstone Bridge
Electron Beam in a Magnetic Field
Induction
Impedance
Photo-Electric Effect

Optics
Image Construction on Curved Mirrors
Image Construction Through Lenses
Refraction, Snell's Law, and Chromatic Dispersion
Light Polarization
Double-Slit Interference and Diffraction

Waves
Doppler— <i>In Development</i>
Beats— <i>In Development</i>