Chapter Title: Potential Energy and Conservation of Energy

Sections: Work and Potential Energy, Path Independence of Conservative Forces, Determining Potential Energy Values, Conservation of Mechanical Energy, Reading a Potential Energy Curve

Potential Energy

Two basic general types of energy: Kinetic energy and Potential energy

Potential energy due to the gravitational force is called, gravitational potential energy.

Energy associated with the state of compression or extension of an elastic object is called elastic potential energy.

Force Types

By definition, work (W) is associated with the force (F); $W = F\Delta s$

Conservative Force and Non-conservative Force

Conservation of Mechanical Energy

$$E_{mec} = K + U$$

$$K_2 + U_2 = K_1 + U_1$$

Reading a Potential Energy Curve