Chapter Title: Potential Energy and Conservation of Energy

Sections: Work Done on a System by an External Force, Conservation of Energy

Work Done on a System by an External Force

Friction Involve

$$W = \Delta E_{mec} + \Delta E_{th}$$

Where $E_{th} = f_k d$. Here, f_k is kinetic frictional force, and d is the displacement as if $W = \vec{F}.\vec{d}$.

Conservation of Energy of a System

The total energy E of a system can change only by amounts of energy that are transferred to or from the system.

Power (in terms of Energy)

The power in terms of energy is the rate at which work is done by a force,

$$P_{avg} = \frac{\Delta E}{\Delta t}$$