

**Formula Sheet for PHY 101 Mid-term Exam 1**  
**Thursday 21 Sept 2006**

$$KE = \frac{1}{2}mv^2.$$

$$GPE = mgh.$$

$$Elast.PE = \frac{1}{2}kx^2.$$

$$Work = F_x * \Delta x.$$

$$Work_{total} = \Delta KE.$$

$$Work_{external} = \Delta PE.$$

$$P = \frac{\Delta E}{\Delta t}.$$

$$F_{grav} = mg. \text{ (near the Earth's surface)}$$

$$F_{spring} = kx.$$