

# Overview of Semester

- Newton's Laws

- $\Sigma F = m a$

- Work-Energy

- $\Sigma F = m a$       multiply both sides by  $d$

- $\Sigma W = \Delta KE$       Energy is “conserved”

  - Useful when know Work done by forces

- Impulse-Momentum

- $\Sigma F = m a$       multiply both sides by  $\Delta t$

- $\Sigma I = \Delta p$       Momentum is “conserved”

  - Useful when know about **EXTERNAL** forces

  - Works in each direction independently