

UNIT 5
EQUATION “CHEAT SHEET”

Name	Equation	Variables
Work	$W = F \cdot d$	W: work F: force d: distance force is applied over
Work Against Gravity	$W = mgh$	W: work m: mass g = 9.81 h: height above the ground
Power	$P = \frac{W}{t}$	P: power W: work t: time
Work-Kinetic Energy Theorem	$W = \Delta KE$	W: work ΔKE : change in kinetic energy
Kinetic Energy	$KE = \frac{1}{2}mv^2$	KE: kinetic energy m: mass v: velocity
Gravitational Potential Energy	$GPE = mgh$	GPE: gravitational potential energy m: mass g = 9.81 h: height above the ground
Elastic Potential Energy	$EPE = \frac{1}{2}kx^2$	EPE: elastic potential energy k: spring constant x: distance object is stretched or compressed
Mechanical Energy	$ME = KE + GPE + EPE$	ME: mechanical energy KE: kinetic energy GPE: gravitational potential energy EPE: elastic potential energy