Physics 103
Example Syllabus

Lecture # **Topics**

Week 1
1 Chapter 1 Introduction
Week 2
2 Chapter 2.2 Velocity and Acceleration
3 Chapter 2.1-2.3-6 Newton's laws
Lab 1 MC-1 Introduction to Phys Lab
Week 3
4 Chapter 3.1,3.4 Motion in 1-D with const. acceler., free fall
5 Chapter 4.2-3 Motion in 2-D: projectile and relative motion
Lab 2 MC-2 Motion on an incline
Week 4
6 Chapter 3.2-3 + 3.5-8 + 4.1 More on relative motion,
3rd Newton's law and Friction motion, incline
7 Chapter 4.1-4.4 More on Forces, tension, pulleys, air drag
Lab 3 MC-4 Acceleration in Free Fall
Week 5
8 Chapter 5.1-5.2 Circular Motion
9 Chapter 5.3-5.6 Gravitation
Lab 4 MC-6 Force and Motion
Week 6
10 Chapter 6.1-6.2 Work, Kinetic Energy
11 Chapter 6.3-6.8 Potential Energy, Conservation of energy, Power
Make up Labs
Week 7
12 Chapter 7.1-7.4 Momentum and Impulse
13 Chapter 7.4-7.8 Collisions
Lab 5 MC-5 Conservation of momentum and projectile motion
Week 8
14 Chapter 8.1-8.3 Rotational Motion: Torque, Equilibrium
15 Chapter 8.4-8.6 Rotational Dynamics, Moment of Inertia
Lab 6 M-3 Equilibrium of forces and torque
Week 9
16 Chapter 9.1-9.3 Rotational Kinetic Energy and Angular Momentum
17 Chapter 9.4-9.6 Angular Momentum Applications
Lab 7 MC-9 Angular acceleration of a fly-wheel
Week 10
18 Chapter 10.1-10.4 Pressure, Hydraulics, Buoyancy
19 Chapter 10.5-10.6 Fluids in Motion
Make up Labs

Week 11

20 Chapter 11.1-11.3 Simple Harmonic Motion
21 Chapter 11.4-11.6 Stress, Strain, Hooke's Law, Resonance

Lab 8 MC-11 Colliding Carts

Week 12

22 Chapter 12.1-12.5 Waves, Superposition
23 Chapter 13.1-13.3 Sound Waves, Standing Waves

Lab 9 SC-1 Standing Waves

Week 13

24 Chapter 13.4-13.7 Beats, Doppler Effect
25 Chapter 14.1-14.5 Temperature, Heat, Phases

Make up Labs

Week 14

26 Chapter 14.6-14.8 Thermal Expansion, Thermal Transfer
27 Chapter 15 Kinetic Theory of Gases, Ideal Gas Law

Lab 10 HC-3 Latent Heat

Week 15

28 Chapter 16.1-16.6 Laws of Thermodynamics
29 Chapter 16.6-16.10 Entropy & Thermodynamics Applications

Lab 11 HC-1 Ideal gas law