Physics 121 - Summer 2014 Session I

Instructor:
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Please arrange office hours by email.

Monday June 2, 2014 through Friday, July 11, 2014 (6 weeks)
Lecture: MTuWThF 5:30p - 6:50p (PHY 1201)
Lab: TuTh 7:00p - 9:00p (PHY 3306)
Discussion: MW 7:00p - 8:00p (PHY 1201)

Textbook:
Knight, Jones and Field, College Physics, Second Edition Volume 1,
Chapters 1 through 14
*****using the third edition is acceptable**

Grading:
HW: 15%
Exam 1: 20%
Exam 2: 20%
Exam 3: 20%
Participation: 5%
Lab: 20%

Assignments (two a week): due Tuesdays and Fridays

Outline of Topics (not necessarily in this order)
Chapter 1 – Position, Velocity, Scalars and Vectors, Significant Figures, Scientific Notation, Changing Units
Chapter 2 – Motion in 1D, Equations of Motion, Falling Objects
Chapter 3 – Projectile Motion, Motion on a Ramp
Chapter 4 – Newton's Laws
Chapter 5 – Apparent Weight, Friction, Drag, Ropes and Pulley
Chapter 6 – Circular Motion, Gravitational Force
Chapter 7 – Torque
Chapter 8 – Spring and Hooke's Law
Chapter 9 – Momentum Conservation, Elastic and Inelastic Collision
Chapter 10 – Work, Kinetic, Potential and Thermal Energy, Power
Chapter 11 – Thermal Energy, Temperature, First Law of Thermodynamics, Heat Engines, Heat Pump, Entropy and Second Law of Thermodynamics
Chapter 12 – Ideal Gas, Specific Heat
Chapter 13 – Fluid Density, Pressure, Buoyancy
Chapter 14 – Simple Harmonic Motion, Pendulum, Spring

Lab Schedule
June 03 – Tue – Pendulum: Simple Error Analysis
June 05 – Thu – Equilibrium of Forces
June 10 – Tue – Motion with Constant Acceleration
June 12 – Thu – Conservation of Energy
June 17 – Tue – Make up Lab for previous 4 labs
June 19 – Thu – Centripetal Force and Acceleration
June 24 – Tue – Equilibrium of Rigid Bodies
June 26 – Thu – Conservation of Linear Momentum
July 01 – Tue – Mechanical Equivalent of Heat
July 03 – Thu – Simple Harmonic Motion and Hooke's Law
July 08 – Tue – Make up for previous 5 labs
July 10 – Thu – No Lab
*****Each lab has to be submitted before the beginning of the next lab.**