SEP 06 2000

Grande Prairie Regional College

Department of Science

PC1010 INTRODUCTORY GENERAL PHYSICS II 3.0 (3-0-3) UT(3)

Lectures	**T R**	**8:30 - 9:50 a.m. J228**
Laboratory	**W or R**	**2:30 - 5:20 p.m. J103**

INSTRUCTOR: Dr. Robert Hunt, P.Eng.

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TEXT: Physics. Cutnell & Johnson, 4th Edition

COURSE CONTENT: Linear and rotational dynamics, work and energy, gravitation, momentum and collisions, rigid body rotation, statics, kinetic theory, heat and thermodynamics.

MARK DISTRIBUTION:

Assignments	10%	
Laboratories	20%	
1st Mid-Term Examination	15%	(Oct. 14/99)
2nd Mid-Term Examination	15%	(Nov. 9/99)
Final Examination	40%	(TBA)

COURSE OUTLINE

Chapter 1	Summary of measurements, units and vectors.
Chapter 2	Speed, velocity, and uniform acceleration.
Chapter 3	Two dimensional kinematics.
Chapter 4	Forces, Newton's Laws of Motion, FBDs, friction, and equilibrium. Dynamics of translational motion. Gravitation.
Chapter 5	Dynamics of uniform circular motion.
Chapter 6	Work, energy, power, and Work-Energy Theorem.

Chapter 7	Impulse, linear momentum, 1 and 2-D collisions.
Chapter 8	Rotational kinematics and linear kinematics.
Chapter 9	Rotational dynamics, torque, equilibrium, FBD, c of g, and moment of inertia.
Chapter 12	Temperature, thermal expansion, specific and latent heats, calorimetry.
Chapter 13	Heat transfer.
Chapter 14	Ideal Gases, Kinetic Theory of Gases.
Chapter 15	Thermodynamics, heat engines, Carnot cycle and entropy.

LABORATORY COMPONENT

Lab #	Source	Content	Week of
1	Exp. #1	Graphical and Error Analysis	Sept. 13
2	Exp #11	Kinem tics	Sept. 20
3	Exp. #10	Acceleration Due to Gravity	Sept. 27
4	Handout	Vector Addition	Oct. 4
5	Exp. #12	Atwood Pulley	Oct. 18
6	Exp. #13	Trans. of Mech. Energy	Oct. 25
7	Exp. #14	Collision Ramp	Nov. 1
8	Handout	Bending of a Beam	Nov. 15
9	Exp. #17	Constant Vol. Gas Therm.	Nov. 22
10	Exp. #18	Mech. Equiv. of Heat	Nov. 29

GRADING GUIDELINES

Percent (Approx.)	Grade
90 - 100	9
80 - 89	8
72 - 79	7
65 - 71	6
57 - 64	5
50 - 56	4
45 - 49	3
26 - 44	2
0 - 25	1

(Cambridge System)