

Grande Prairie Regional College

Department of Science & Technology

PC 1260 INTRODUCTORY GENERAL PHYSICS II 3.0 (3-0-3) UT(3)

Lectures	M W	8:30 - 9:50 a.m. J226
Laboratory	T or F	2:30 - 5:20 p.m. J103

INSTRUCTOR: Dr. Robert Hunt, P.Eng.

OFFICE: C414

PHONE: 539-2008/532-1338 (GPRC/HOME)

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TEXT: College Physics, Serway and Faughn, 5th Edition

COURSE CONTENT: This course is a continuation of PC1240 for students in life and medical sciences. Fluid statics and dynamics, gases, kinetic interpretation; electrostatics; currents and circuits; magnetic field; electromagnetic induction; nuclear radiation, its interaction with matter and applications.

PRE-REQUISITE: PC1240

Credit may be obtained for only one of PC1260 and PC1460.

MARK DISTRIBUTION:

Assignments	15%
Laboratories	20%
Mid-Term Examination	25% (Feb.21/01)
Final Examination	40% (TBA)

COURSE OUTLINE

Chapter 9 Pressure, buoyancy, fluid flow and viscosity.

Chapter 10 Temperature, thermal expansion, ideal gases and Kinetic Theory of Gases.

PC1260 Course Outline

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Chapter 11	Heat, specific heat, latent heat, heat transfer and calorimetry.
Chapter 12	Laws of thermodynamics, heat engines, refrigeration and entropy.
Chapter 15	Charge, Coulomb's Law, electric field and conductors.
Chapter 16	Electric potential, capacitance, dielectrics and applications.
Chapter 17	Electric current, resistance, Ohm's Law, DC, AC and electrical energy.
Chapter 18	Resistors in series and parallel, Kirchoff's Laws and hazards.
Chapter 19	Magnetic Fields, magnetic forces and current-carrying conductors.
Chapter 20	Induction, Lenz's Law, generators and transformers.
Chapter 29	Nuclear energy, radioactivity, decay and applications.
Chapter 30	Nuclear reactions and applications.

LABORATORY COMPONENT

Lab #	Content	Week of
1	Fluid Properties	Jan. 8
2	Terminal Velocity	Jan. 15
3	Constant Volume Gas Thermometer	Jan. 22
4	Mechanical Equivalent of Heat	Jan. 29
5	Mapping of Electric Fields	Feb. 5
6	Capacitance	Feb. 12
7	Simple Electric Currents	Mar. 5
8	e/m for Electrons	Mar. 12
9	Magnetic Fields	Mar. 19
10	Balmer Series	Mar. 26

GRADING GUIDELINES

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