

DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2013 PC 1260 INTRODUCTORY GENERAL PHYSICS II – 3.0 (3-0-3) UT (3)

INSTRUCTOR: Dr. Robert (Bert) **PHONE:** 780-539-2008

Hunt P. Eng. FEC

OFFICE: C414 **E-MAIL:** bhunt@gprc.ab.ca

OFFICE HOURS: MTWR noon-2 pm

PREREQUISITE(S)/COREQUISITE: PC1240

REQUIRED TEXT/RESOURCE MATERIALS: PHYSICS Walker 4th Edition

CALENDAR DESCRIPTION:

This course is a continuation of PC1240 for students in life and medical sciences. It includes fluid statics and dynamics;

electrostatics; current and circuits; magnetic field; electromagnetic induction; nuclear radiation, its

interaction with matter and applications.

CREDIT/CONTACT HOURS: 3 hours lecture and 3 hours lab a week

DELIVERY MODE(S): COURSE OUTLINE

Chapter 15 Pressure, buoyancy, fluid flow and viscosity. Chapter 19 Charge, Coulomb's Law, electric field and conductors. **Chapter 20** Electric potential, capacitance, dielectrics and applications. Chapter 21 Electric current, resistance, Ohm's Law, DC, AC and electrical energy. Resistors in series and parallel, Kirchoff's Laws and hazards. Chapter 22 Magnetic Fields, magnetic forces and currentcarrying conductors. Chapter 23 Induction, Lenz's Law, generators and transformers.

Chapter 24 Reactance, RLC circuits and resonance.

Chapter 32 Nuclear energy, radioactivity, decay and applications.

TRANSFERABILITY: It is a University of Alberta Transfer Course

** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE						
GRADING CONVERSION CHART						
Alpha Grade	4-point	Percentage	Designation			
	Equivalent	Guidelines	Designation			
A⁺	4.0	90 – 100	EXCELLENT			
Α	4.0	85 – 89	EXCELLENT			
A ⁻	3.7	80 – 84	FIRST CLASS STANDING			
B⁺	3.3	77 – 79	FIRST CLASS STANDING			
В	3.0	73 – 76	GOOD			
B ⁻	2.7	70 – 72				
C ⁺	2.3	67 – 69	SATISFACTORY			
С	2.0	63 – 66				
C ⁻	1.7	60 – 62				
D⁺	1.3	55 – 59	MINIMAL PASS			
D	1.0	50 – 54	IVIIIVIIVIAL PAGG			
F	0.0	0 – 49	FAIL			
WF	0.0	0	FAIL, withdrawal after the deadline			

EVALUATIONS: Assignments 15%

Laboratories 20%

Mid-Term Examination 20% (Feb. 13/13)

Final Examination 45% (TBA)

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the Student Conduct section of the College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

**Note: all Academic and Administrative policies are available on the same page.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Lecture	M W	10:00 - 10:50 a.m.	J202
Laboratory	R	2:30 - 5:20 p.m.	J103

LABORATORY COMPONENT

Lab #	Content	Week of
11	Fluid Properties	Jan. 14
12	Terminal Velocity	Jan. 21
13	Coulomb's Law	Jan. 28
handout	Inverse Square Law	Feb. 4
14	Mapping of Electric Fields	Feb. 25
15	Capacitance	Mar. 4
16	Simple Electric Currents	Mar. 11
17	e/m for Electrons	Mar. 18
18	Magnetic Fields	Mar. 25
handout	Balmer Series	Apr. 1