

DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2014

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

INSTRUCTOR:Dr. Robert (Bert)PHONE:780-539-2008Hunt P. Eng. FEC, FGCOFFICE:C414E-MAIL:bhunt@gprc.ab.ca

OFFICE HOURS: M 1-3 pm TW 2-3 pm RF 3+ pm PC Lab in J103

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 current- carrying 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		
Alpha Grade	Equivalent	Guidelines	Designation		
A ⁺	4.0	90 - 100	EXCELLENT		
А	4.0	85 – 89	EACELLEINT		
A	3.7	80 - 84	FIRST CLASS STANDING		
B ⁺	3.3	77 – 79	FINST CLASS STANDING		
В	3.0	73 – 76	GOOD		
B⁻	2.7	70 – 72	0000		
C⁺	2.3	67 – 69			
С	2.0	63 – 66	SATISFACTORY		
C [−]	1.7	60 - 62			
D ⁺	1.3	55 – 59	MINIMAL PASS		
D	1.0	50 – 54			
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. 13/14)
	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	MW	10:00 - 10:50 a.m.	J202
Laboratory	R	2:30 - 5:20 p.m.	J103

LABORATORY COMPONENT

Content	Day
Fluid Properties	Jan. 16
Terminal Velocity	Jan. 23
Coulomb's Law	Jan. 30
Inverse Square Law	Feb. 6
Mapping of Electric Fields	Feb. 27
Capacitance	Mar. 6
Simple Electric Currents	Mar. 13
e/m for Electrons	Mar. 20
Magnetic Fields	Mar. 27
Balmer Series	Apr. 3
	Fluid Properties Terminal Velocity Coulomb's Law Inverse Square Law Mapping of Electric Fields Capacitance Simple Electric Currents e/m for Electrons Magnetic Fields