Grande Prairie Regional College
Department: Academic Upgrading

COURSE OUTLINE — Winter 2008

Physics 0110 5 (5-0-0) Physics Grade 10 Equivalent

Instructor's name: Joelle Reynolds Phone number: 539-2227

Instructor's office: A207 Email: JReynolds@GPRC.ab.ca

Office Hours: 8 – 9 am Tues/Thurs, 1 – 2:30 Fridays, or by appointment

Calendar Description:

PC 0110 Physics Grade 10 Equivalent 5 (5-0-0) HS Time: 75 Hours
The major concepts to be covered include kinematics; force; work, energy and power; and heat. Strong emphasis on developing problem-solving skills.

Prerequisite: SC0100 or permission of the Department
Corequisites: MA0110

Resource requirements:

No recommended textbook. Tests and exams will be based on class notes and activities. A module developed by Dr Devinder Sekhon is available in the bookstore that covers some topics in the course.

Attendance:

Regular attendance is expected of all students. Success in education is directly linked to attendance. Attendance will be taken during class. Any student **missing more than 15 classes may be debarred from writing the final exam**. Lateness is highly disruptive to a class. Please be considerate.

Assignments, Tests and Exams:

All assignments and exams **MUST** be completed on time. A missed exam will result in a score of zero unless **PRIOR arrangements** have been made with the Instructor for valid reasons to write the test/exam at some other time. All assignments **MUST** be handed by the deadline.

Labs:

There will only be a few labs in the course, and attendance in them is compulsory. A missed lab will result in a mark of zero. Makeup labs CANNOT be guaranteed, and may be permitted only under special circumstances. All labs reports MUST be handed in before the deadline. Labs reports will NOT be marked if handed in late by more than two days unless pre-approval of the Instructor has been secured.

Course Delivery and Evaluation:

This course is a lecture course which requires student participation. The course content is divided into 4 weighted units. Each unit includes an assignment and/or lab composing 20% of the mark. The remaining 80% is the unit exam. The final evaluation of the course is calculated as follows:

Course Evaluation

Unit 1 - Kinematics	15%
Unit 2 - Force and Work	15%
Midterm Exam	15%
Unit 3 - Energy	15%
Unit 4 - Thermodynamics	15%
Final Exam	30%

Final grades are given as follows:

Alpha Grade	4-Point Equivalent	Percentage Guidelines	*Designation*
A+	4.0	90 - 100	Excellent
A	4.0	85 - 89	
A-	3.7	80 - 84	1st Class Standing
B+	3.3	76 - 79	
B	3.0	73 - 75	Good
B-	2.7	70 - 72	
C+	2.3	67 - 69	Satisfactory
C	2.0	64 - 66	
C-	1.7	60 - 63	
D+	1.3	55 - 59	Minimal Pass
D	1.0	50 - 54	
F	0.0	0 - 49	*Fail*

Course Content:

Unit/Appx Classes	Major Topics
Unit 1: Kinematics 9 classes	- scalar vs. vector quantities - distance, displacement, average speed, velocity, acceleration - graphing, interpreting graphs and solving related problems
Unit 2: Force and Work 9 classes	- force - friction and gravity - Newton's Laws of Motion - work
MIDTERM EXAM TBA	
Unit 3: Energy 9 classes	- types of energy - potential, kinetic and mechanical energy - Law of Conservation of Energy - efficiency - energy sources - renewable and non-renewable resources, and sustainability
Unit 4: Thermodynamics 9 classes	- open and closed systems - the laws of thermodynamics - temperature, specific heat capacity - phase changes - thermal expansion
FINAL EXAM TBA	