

**Grande Prairie Regional College  
Academic Upgrading Department**

**PC 0110 A2 – Physics-Grade 10 Equivalent  
Fall 2009  
3 (3 – 0 - 0.5)**

Instructor's name:	Tanvir Sadiq	Phone number:	(780) 539-2865
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Office Hours:	TBA		

**Calendar Description:**

PC 0110 - Physics Grade 10 Equivalent; 3 (3-0-0.5) HS Time: 52 Hours

**Description:** The major concepts to be covered include linear motion, force, work, energy and power, and heat.

**Prerequisite:** SC0100 or permission of the Department

**Co-requisites:** MA0110

**Resource requirements:**

- Reference books:
- i) **Science 10 by** Sandner, L., Schaeffer, H., Lacy, D., Sosnowski, C. (2004), Published by Addison-Wesley.
  - ii) Select notes provided at instructor's discretion
  - iii) Class Notes:

A binder with loose leaf papers (lined or plain); two transparent folders; sharp mechanical pencil, colored pens or pencils or markers, ruler, eraser; non-programmable scientific calculator.(available for under \$20).

**Attendance:**

Regular attendance is expected of all students. Success in education is directly linked to attendance. Attendance will be taken during class. Verbal or written communication is suggested in case of missing a class. Any student **missing more than 10 classes may be debarred from writing the final exam.** Lateness is highly disruptive to a class. Please be considerate.

**Course Delivery and Evaluation:**

This course is a lecture course which requires student participation. The course content is divided into four weighted sections. Each unit includes assignment, regular homework checking, unit test, and /or lab. **The key to success is to ask questions** whenever you have difficulty understanding instructions, the examples, or the exercises. **Do not hesitate to ask for help.** It is expected to do the home work exercises in a neat, organized, and orderly manner. Home work exercises will be regularly checked and will count 10% towards the final grade. After each section, you must write a test. When writing a test, be sure to show all of your work on test paper. Marks are given for method as well as the final answer. 60% is considered a pass mark for each section.

An approximately one hour long midterm exam, which will cover the first two sections, will be done after

the two section tests. A few (two or three) will be done during the course to emphasize the concepts learnt during the course. A three-hour final exam covering all four sections will be conducted at the end of the semester.

## Homework Exercises, Tests, and Exams:

Homework exercises, assignments, tests, 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 homework exercises **MUST** be handed in by the deadline. **Follow the sample Homework provided by the instructor.**

## Labs:

There will only be a few labs in the course, and attendance 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. Lab reports will NOT be marked if handed in late by more than two days unless pre-approval of the Instructor has been secured.

**Your final mark is determined by:**

4 unit tests	24%
Homework Exercises	10%
Assignments	12%
Labs	9%
Midterm Exam	15%
Final Exam	30%

**Final grades are based on the following distribution:**

<i>Descriptor</i>	<i>Percentage Guide</i>	<i>Grade</i>	<i>Points</i>	<i>Descriptor</i>	<i>Percentage Guide</i>	<i>Grade</i>	<i>Points</i>
<i>Excellent</i> <b>84 – 100%</b>	90 - 100	A+	4.0	<i>Satisfactory</i> <b>60 – 71 %</b>	67 - 69	C+	2.3
	85 - 89	A	4.0		64 - 66	C	2.0
	80 - 84	A-	3.7		60 - 63	C-	1.7
<i>Good</i> <b>72 – 83 %</b>	76 - 79	B+	3.3	<i>Poor</i>	55 - 59	D+	1.3
	73 - 75	B	3.0	<i>Minimal Pass</i>	50 - 54	D	1.0
	70 - 72	B-	2.7	<i>Fail</i>	0 - 49	F	0

## Course Content:

<b>Unit/App. Classes</b>	<b>Major Topics</b>
Unit 1: Kinematics ~9 classes	<ul style="list-style-type: none"> <li>- scalar vs. vector quantities</li> <li>- distance, displacement, average speed, velocity, acceleration</li> <li>- graphing, interpreting graphs and solving related problems]</li> <li>- UNIT TEST</li> </ul>
Unit 2: Force and Work ~9 classes	<ul style="list-style-type: none"> <li>- force</li> <li>- friction and gravity</li> <li>- Newton's Laws of Motion</li> <li>- work</li> <li>- UNIT TEST</li> </ul>
<b>MIDTERM EXAM TBA</b>	
Unit 3: Energy ~9 classes	<ul style="list-style-type: none"> <li>- types of energy</li> <li>- potential, kinetic and mechanical energy</li> <li>- conservation of energy in mechanical systems</li> <li>- UNIT TEST</li> </ul>
Unit 4: Thermodynamics ~9 classes	<ul style="list-style-type: none"> <li>- energy sources</li> <li>- renewable and non-renewable resources, and sustainability</li> <li>- the laws of thermodynamics</li> <li>- efficiency</li> <li>- UNIT TEST</li> </ul>
<b>FINAL EXAM TBA</b>	

### **AUD STUDENT CLASSROOM DEPARTMENT GUIDELINES DRAFT May 2008**

The Academic Upgrading Department is an adult education environment. Students are expected to show respect for each other as well as faculty and staff. They are expected to participate fully in achieving their educational goals in a timely manner.

Certain activities are disruptive and not conducive to an atmosphere of learning. In addition to the *Student Rights and Responsibilities* as set out in the College calendar, the following guidelines will maintain an effective learning environment for everyone. We ask the cooperation of all students in the following areas of classroom department.

1. Students are expected to turn off cell phones during class time or in labs.
2. Refrain from disruptive talking or socializing during class time.
3. Be respectful of others regarding food or beverages in the classroom. Clean up your eating area and dispose of garbage.
4. Recycle paper, bottles and cans in the appropriate containers.
5. Students are expected to be punctual. Arrive on time for classes and remain for the duration of scheduled classes or related activities.
6. Children are not permitted in the classrooms.
7. Students are expected to notify his/her instructor of any extenuating circumstances.

**Electronic Devices**

No unspecified electronic devices will be allowed in exams.

**Success Standard**

Although 50% is considered a pass in most courses, if you wish to be successful at the next level, we strongly recommend that you have a mark of 60% or better in your pre-requisite courses.

**Examinations:**

The final exam will be 3 hours long and is scheduled by the registrars' office in December.

**Statement on Plagiarism:**

Plagiarism will not be tolerated in any case. The instructor reserves the right to use electronic plagiarism detection services.