**Grande Prairie Regional College**
**Department: Academic Upgrading**

**COURSE OUTLINE — Fall 2008**

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

Instructor's name: Sukhvir Sandhu Phone number: (780) 539-2234

Instructor's office: C310 Email: ssandhu@gprc.ab.ca

Office Hours: Tuesday and Thursday (1:00-2:00) in A210 (Math Lab)
Or we can arrange for a convenient time and place for help.

## 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:

Sandner, L., Schaeffer, H., Lacy, D., Sosnowski, C. (2004). **Science 10,** Toronto, Ontario: Addison-Wesley.
Notes will be provided throughout the semester through Blackboard and/or duplicated material.
A binder with loose leaf papers (lined or plain); two transparent folders; sharp mechanical pencil, colored pens or pencils, ruler, & eraser; scientific calculator

## 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.

A 50-minute 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.

## 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. 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 section tests | 24% |
| Homework Exercises | 10% |
| Assignments | 12% |
| Labs | 9% |
| Midterm Exam | 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 | First 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/App. Classes | Major Topics |
|---|---|
| Unit 1:<br>Kinematics<br>9 classes | - scalar vs. vector quantities<br>- distance, displacement, average speed, velocity, acceleration<br>- graphing, interpreting graphs and solving related problems |
| Unit 2:<br>Force and Work<br>9 classes | - force<br>- friction and gravity<br>- Newton's Laws of Motion<br>- work |
| MIDTERM EXAM TBA | |
| Unit 3:<br>Energy<br>9 classes | - types of energy<br>- potential, kinetic and mechanical energy<br>- conservation of energy in mechanical systems |
| Unit 4:<br>Thermodynamics<br>9 classes | - energy sources<br>- renewable and non-renewable resources, and sustainability<br>- the laws of thermodynamics<br>- efficiency |
| FINAL EXAM TBA | |

## AUD STUDENT CLASSROOM DEPORTMENT 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 deportment.

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 during December10 – December 19

**Statement on Plagiarism:**
The instructor reserves the right to use electronic plagiarism detection services.