



Department: Academic Upgrading

Physics 0130 Winter 2008

Course information and outline:

Grade 12 Equivalent PC0130 (5-0-1.5)

Credit/Contact Hours: 5-credit course - 5 hr./wk lecture and 1.5 hr/wk lab

Instructor: Sheryl Heikel (Bachelor of Education: Secondary Math/Science)

Phone: 539-2849

Office: E401-2

E-mail: sheikel@gprc.ab.ca

Office Hours: Immediately after class Tuesday 2:30 -3:30 and
Thursday 2:30 -3:00, or by appointment

Prerequisite(s)/co-requisite(s): PC 0120 or equivalent
MA 0120 or equivalent or MA0130 placement.

Required Text: COLLEGE PHYSICS by WILSON & BUFFA (Sixth Edition)

Course Description: The major concepts to be covered in this course include:
Brief review of Work, Energy, Conservation Laws; Trigonometry and vectors;
Momentum and its conservation; Electric forces and fields; Current
electricity; Magnetic fields and electromagnetic induction; Blackbody
radiation, photoelectric effect, and Compton's effect; The Nucleus and the
nuclear reactions- fission and fusion. Both understanding of Physics theory,
problem solving and lab skills are emphasized. Practice problems will be
assigned from each chapter.

Labs: Lab attendance is compulsory. Missed labs receive a score of zero.
Make-up labs CANNOT be guaranteed. Lab reports are due on the pos-
dates. Late reports result in a penalty of 2 marks per day for up to two
days. After this they are not accepted.

Regular attendance is important for success in the course.

Cell phones or otherwise will not be permitted.

The instructor reserves the right to use electronic plagiarism detection services.

| <u>Unit</u> | <u>Dates</u> |
|--|-----------------------------|
| Introduction | Jan 2-11 |
| Unit A: Momentum and Impulse Unit A Exam | Jan 18-25 Jan. 28 |
| Unit B: Electric forces and fields; Current electricity; Unit B Exam | Jan 28-Feb 14 Feb 15 |
| Reading Week Midterm Exam 1 | February 18-22 Feb. 25 |
| Unit C: Magnetic fields,electromagnetic induction; EMR Unit C Exam | Feb 26 - Mar 14 Mar 17 |
| Unit D: Atomic Physics Unit D Exam | Mar 18 - Apr 10 April 11 |
| Last day of regular classes April 11 | |
| Midterm Exam 2 will be scheduled with college finals. | |

Lab Period Schedule (Mondays 12:30-2:20)

| | |
|---------|---------------------------------------|
| Jan. 7 | no lab |
| Jan. 14 | Lab 1: Spring Constant |
| Jan. 21 | Lab 2: Momentum in One Dimension |
| Jan. 28 | Unit A Exam |
| Feb. 4 | Lab 3: Electrostatics |
| Feb. 11 | Lab 4: Ohm's Law |
| | February 15 Friday Unit B Exam |
| | Reading Week February 18-22 |
| Feb. 25 | Midterm Exam |
| Mar. 3 | Lab 5: Circuits, Series and Parallel |
| Mar. 10 | Lab 6: Current Balance |
| Mar. 17 | Unit C Exam |
| Mar. 24 | to be announced |
| Mar. 31 | to be announced |
| April 7 | to be announced |
| | April 11 Friday Unit D Exam |

Evaluation: The final grade in the course will be based on the following components.

| | |
|----------------|-------|
| Unit Exams (4) | = 40% |
| Midterms (2) | = 45% |
| Labs | = 15% |

Exams **must** be written at the scheduled times unless **prior** arrangements have been made with the instructor. A missed exam will result in a score of **zero**.

Final Grades are assigned on the Letter Grading System.

**Academic Upgrading Department
Grading Conversion Chart**

| Alpha Grade | 4-point Equivalent | Percentage Guidelines | Designation |
|----------------|--------------------|-----------------------|----------------------|
| A ⁺ | 4 | 90 – 100 | EXCELLENT |
| A | 4 | 85 – 89 | |
| A ⁻ | 3.7 | 80 – 84 | FIRST CLASS STANDING |
| B ⁺ | 3.3 | 76 – 79 | |
| B | 3 | 73 – 75 | GOOD |
| B ⁻ | 2.7 | 70 – 72 | |
| C ⁺ | 2.3 | 67 – 69 | SATISFACTORY |
| C | 2 | 64 – 66 | |
| C ⁻ | 1.7 | 60 – 63 | |
| D ⁺ | 1.3 | 55 – 59 | MINIMAL PASS |
| D | 1 | 50 – 54 | |
| F | 0 | 0 – 49 | FAIL |