Physics 1B03
Sections 4,5,6
Course Outline for Term 2, 2013-2014

Home page: http://www.physics.mcmaster.ca/phys1b03/

Course Objectives: To turn you into a physics problem solver!

- Appreciate that equations don't solve problems – ideas solve problems.
- Move beyond being able to recite the laws of mechanics to being able to use them.
- Understand that a wide range of problems can be tackled with a few basic concepts.

Instructors

C04	P. Sutherland	ABB 343	22611	pgs@mcmaster.ca
C05	R. Nejat	ABB 235	23632	nejat@physics.mcmaster.ca
C06	K.Hughes	ABB 237	23629	khughes@mcmaster.ca

Course Needs

Serway and Jewett: *Physics for Scientists and Engineer with Modern Physics*, 8^{th} ed,
Physics 1B03 Laboratory Manual course pack (Jan 2014) and a black, bound, hardcover lab notebook.
I-clicker (Can be purchased new or used from the bookstore or another student.)

Format:

- Each class meets three times per week.
- There will be assignments most weeks. We will be using the software tool called LONCAPA. This tool generates individualized assignments for you to print. Later, you can enter your answers which the program will grade.
- There will be a midterm test on the evening of the week indicated (over). Information on the actual time and location will be available closer to the date.
- The material studied in class is supported by practical exercises. There are practical sessions every week each lasting 2 hours. All the sessions are in BSB B114.

Calculator:

Only the McMaster Standard Calculator will be permitted in tests and examinations.

Marking Scheme

Assignments	7.5 %
Test	25 %
Class Activity & Quizzes	5 %
Practical Exercises	12.5 %
Exam	50 %

Missed Lab Work

Lab work missed due to illness or personal circumstances must be made up as soon as possible. Use MSAF immediately to report the missed lab and then contact the lab supervisor, Alex Vorobyov (voroby@mcmaster.ca) to reschedule. A lab should normally be made up within two weeks. (If possible, make up the lab in the same week at a different lab section.).

Schedule

Week		Topic		Practical Exercise
begins	Number			
Jan 6	1	Kinematics		Data Studio
Jan 13	2	Newton's Laws		Uncertainties
Jan 20	3	Newton's Laws		Kinematics in One Dimension
Jan 27	4	Kinematics in 2D		Forces I
Feb 3	5	Energy		Forces II
Feb 10	6	Energy		Conservation of Energy
Feb 17	**Reading Week**			
Feb 24	7	Momentum		No lab
Mar 3	8	SHM	Midterm Monday	Impulse and Momentum
Mar 10	9	Waves		SHM
Mar 17	10	Interference		Waves, Reflection and Superposition
Mar 24	11	Interference		Interference of Waves
Mar 31	12	Fluids		Interference of Light Waves
Apr 7	13	Fluids		

Scientific Honesty:
Physics isn't meant to be done alone. Seeking help when you have difficulties and discussing physics with your colleagues is encouraged but what you submit **must be your work**. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy at http://www.mcmaster.ca/academicintegrity . The following illustrate only three forms of academic dishonesty:

1. Plagiarism, i.e. the submission of work that is not one's own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

In case of discrepancy between the online and handout version of the course outline, the handout version shall be taken as correct.