

Physics 1B03
Sections 1,2,3
Course Outline for Term 1, 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

C01, C02	K. Hughes	ABB 237	23629	khughes@mcmaster.ca
C03	I. Yavin	ABB 321	23178	yavin@mcmaster.ca

Course Needs

C01/C02: Serway and Jewett: *Physics for Scientists and Engineer with Modern Physics*, 8th ed,

C03: Bueche & Hecht: *Schaum's Outline of College Physics*, 10th edition

Physics 1B03 Laboratory Manual course pack, Sept 2013, and a black, bound, hardcover lab notebook.
I-clicker (Can be purchased from the bookstore.)

Format:

- Each class meets three times per week.
- There will be assignments most weeks. We will be using the software tool called Computer-Assisted Personalized Approach (CAPA). 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			
Sept 2	1	Kinematics		Data Studio
Sept 9	2	Kinematics		Uncertainties
Sept 16	3	Newton's Laws		Kinematics in One Dimension
Sept 23	4	Newton's Laws		Forces I
Sept 30	5	Kinematics/Energy		Forces II
Oct 7	6	Energy		No lab
Oct 14	7	Energy/Momentum		*Conservation of Energy (except M)
Oct 21	8	Momentum	Midterm Week	*Labs for M and R sections
Oct 28	9	SHM		*Impulse and Momentum (except R)
Nov 4	10	SHM/Waves		SHM
Nov 11	11	Waves/Interference		Waves, Reflection and Superposition
Nov 18	12	Interference		Interference of Waves
Nov 25	13	Interference/Fluids		Interference of Light Waves
Dec 2	14	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 behavior 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.