



Department of Physics
University of Toronto

The Physics of Everyday Life

PHY205-H1S



Jason Harlow

Course Outline: Winter 2013

[Version Feb.16 2013 – Changes from Jan. 7 version in blue]

Welcome! The goals of this course are to study the physics behind everyday objects and experiences, and deepen our understanding of the immediate world around us.

Instructor: Jason Harlow

Office: MP121B (Behind the payphone, 1st floor of the North Wing of McLennan Labs, 60 St. George St.)

Email: jharlow@physics.utoronto.ca

Office Hours: Mondays: 4-5PM, Fridays: 9-10AM. In addition to these hours, you have are invited to call or email for an appointment, or just drop by my office.

Phone: (416) 946-4071 **Web Page:** <http://www.physics.utoronto.ca/~jharlow/>

I will endeavour to respond to email inquiries from students within 2 days. If you do not receive a reply within this period, please resubmit your question(s) and/or phone (leave a message if necessary).

Course Web Site: <http://goo.gl/QY7IA>

Meeting Times: Lectures are on Mondays and Wednesdays either from 2:10 to 3:00pm (L0101), or 5:10 to 6:00pm (L0501) in MP202. Tutorials meet once per week on Mondays, Wednesdays or Fridays. The locations and times for these tutorials are posted on the course web-site. NOTE: You must register for both the lecture and the tutorial parts of this course. **Because the course is very full, you must attend the lecture and tutorial section that you are officially signed up for on ROSI.** There are no exceptions possible because of space and equipment limitations.

Required Text: “Conceptual Physics” 11th edition, by Paul Hewitt (C)2011 Pearson Education. This course covers Chapters 2-8, 12-16, and 19-28.

Course Objectives and Requirements: We will study introductory physics from the perspective of everyday experiences. The specific topics we will study are listed on the course web-site under “Classes”. At the end of this course, you will be able to:

- Explain how and why physical phenomena occur,
- Analyze data and determine physical parameters,
- Apply your knowledge of physics to explain and interpret new situations, and
- Appreciate how physics connects to your everyday life.

This course is primarily intended as a Science Distribution Requirement course for students in the Humanities and Social Sciences. There are no university-level prerequisites for this course. However, there are several exclusions: you may *not* have taken or be taking PHY131 or PHY151, or your registration in the course will be deleted. High school level ability in algebra and geometry will be needed, and you will need a non-programmable pocket calculator that can do scientific notation.

Tutorials: Each week the class will divide up into groups of about 25 to discuss material from the text and lectures in a less formal environment, work through and discuss problems similar to those on the problem sets and do some hands-on activities which reinforce topics from the course.

Marking scheme:

Final Exam	40%
Two Mid-Term Tests	35%
Problem Sets	15%
Lecture Participation (clicker use)	5%
Tutorial Participation (worksheets)	5%

- On January 30 and March 6, **Mid-Term Tests** (each 50 minutes long) will be held during lecture time in EX100 (255 McCaul St.). Let me know at least 2 weeks before each test if you have a conflict, so I can try to find an alternate time for you to write the test. *It is your responsibility to avoid course conflicts in your schedule.*
- The **Final Exam** will be two hours long, **beginning on Tuesday April 30 at 2:00pm in a room to be announced.**
- Both the tests and exam will involve a combination of multiple choice and written questions, which will test your understanding of course material and ability to think and apply what you have learned to simple problems and explaining phenomena. A simple pocket calculator and a 5"×3" index card with your own hand-written notes will be permitted during the test and exam.
- Five **Problem Sets** will be assigned on occasion throughout the semester. These will be distributed during your tutorial. Students are encouraged to use all resources when thinking about the problems and formulating answers. Final written answers to problem sets should be prepared by students individually. They need not be typed, but should be legible. The late penalty for problem sets is 10% per day of lateness reduction in mark.
- **Lecture Participation:** Every student should have their own i-clicker remote, available from the campus bookstore. Please bring your clicker to every lecture, for use in-class votes and discussions questions. There are two purposes of clickers: (1) to involve students in the class, survey the class, figure out what the majority of the class knows, and promote discussion, and (2) to monitor student attendance for the 5% lecture participation mark. **For each lecture beginning with class 2, 1 participation point is awarded for clicking any answer (right or wrong) for half or more of the quizzes per lecture. In addition, starting with class 11, if both of the first two reading questions are answered correctly, an extra 0.1 bonus point will be awarded for that lecture. The final Lecture Participation mark is based on the best 17 out of 21 scores, and is out of 17.** Any student can miss or fail to participate in up to four classes without penalty. If more than four classes must be missed please provide me with documentation, medical or otherwise, and I will **excuse these absences**. Unlike the other aspects of this course, i-clickers are not strictly mandatory. If you do not own, and do not wish to purchase an i-clicker remote, please contact me as early as possible to make other arrangements for monitoring your lecture participation, so you do not lose marks. The deadline for making other arrangements is January 25, 2013.