

Physics 205 (0001 and 0002): Elementary Physics III (Spring 2017)
Tues., Thurs. 8-9:15, East Hall Auditorium

Required: Credit for having passed PHY203 and PHY273. Concurrent enrolment in PHY275 (lab) and PHY275R (recitation). Successful completion of/or concurrent enrolment in MTH142. *If you have previously taken and passed PHY275, you need not repeat the lab, but you must register for, and attend, a section of PHY275R.*

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Text: *Physics for Scientists and Engineers, 6th Ed., Vols. 1&2*, by Paul A. Tipler and Gene Mosca (Freeman/Worth, 2008) (Chaps. 15-20, 31-33).

Homework: Homework will be administered through a web-based service named WebAssign. WebAssign can be accessed at <http://webassign.net/student.html>. The Class Key for WebAssign for this course is: URI 3302 2349. You will enroll with this class key, creating your own user ID and password. When you go to the login page, simply click the box saying "I have a class key." When you first log on you will be asked for your access code, which will be packaged with the textbook, which is available in the URI Memorial Union bookstore. If you do not have an access code, you can pay an online fee. You will have 4 chances to submit your homework solutions before the due date. **There will be no extensions of the due date.** Log on well before the first assignment due date.

Exams: There will be three unit exams and a final exam (see schedule below). Exams are closed book: a calculator and one note sheet of 8.5"×11" will be allowed for the unit exams. Each unit exam will be of 1¼-hour duration. The final exam (three hours) will have three sections corresponding to the three units, plus questions covering chapter 33. Four note sheets and a calculator will be allowed for the final. If you earn a higher score on a section of the final exam than you did on the corresponding unit exam, the score on the corresponding section of the final will replace your unit exam score. **The final exam units also serve as make-up exams: no other make-up exams are given.**

Grading: Average of three best hour exams: 40%; Final exam: 30%; Homework: 15%; Recitation: 15% If the weighted average of your three best exam scores exceeds either your homework score or your recitation score, the exam average will be used in place of the lower one(s). Letter grades will be assigned with the following minimal basis: **A: 93, A-: 90, B+: 87, B: 83, B-: 80, C+: 77, C: 73, C-: 70, D+: 67, D: 60.**

PHY205 Schedule:

Date	Lecture	WebAssign Problems/Due date
Jan. 24	Intro., Chapter 17	Chap. 17: 33,36,45,46,47,54,60,61
Jan. 26	Chapter 17	
Jan. 31	Chapter 18	
Feb. 2	Chapter 18	Chap. 17 WebAssign due by 11pm Chap. 18:

		28,33,38,46,64
Feb. 7	Chapter 18	
Feb. 9	Chapter 19	
Feb. 14	Chapter 19	Chap. 18 WebAssign due by 11pm Chap. 19: 28,32,41,42,46,56,78
Feb. 16	Chapter 19	
Feb. 21	Exam1: Chap.17,18	
Feb. 23	Chapter 19	
Feb. 28	Chapter 20	
Mar. 2	Chapter 20	Chap. 19 WebAssign due by 11pm Chap. 20: 23,29,30,41,44
Mar. 7	Chapter 15	
Mar. 9	Chapter 15	Chap. 20 WebAssign due by 11pm Chap. 15: 32,38,47,61,72,81
Mar. 12-19	Spring break	
Mar. 21	Chapter 15	
Mar. 23	Chapter 16	
Mar. 28	Chapter 16	Chap. 15 WebAssign due by 11pm Chap. 16: 27,47,51,57
Mar. 30	Exam 2: Chap.19,20,15	
Apr. 4	Chapter 31	
Apr. 6	Chapter 31	Chap. 16 WebAssign due by 11pm Chap. 31: 29,31,41,53,64,80
Apr. 11	Chapter 32	
Apr. 13	Chapter 32	Chap. 31 WebAssign due by 11pm Chap. 32: 29,41,79,86
Apr. 18	Chapter 32	
Apr. 20	Chapter 33	Chap. 32 WebAssign due by 11pm Chap. 33: 22,41,62,63,82
Apr. 25	Exam 3: Chap.16,31,32	
Apr. 27	Chapter 33	Chap. 33 WebAssign due by 11pm
May 11	Final Exam: Chap.15-20, 31-33	8:00 am – 11:00 am

Recitation (PHY275R): Attendance at recitations is required. Recitations will consist of problem-solving activities and open-book quizzes. The problems to be solved in recitation are listed below in the schedule.

PHY275: LABORATORY POLICIES (SPRING 2014)

Laboratory Schedule: The PHY275 laboratory meets once a week for two hours. During the semester, you will be performing the following experiments:

Experiment	Room	Date
Review Error Analysis	East 15	1/26,27
Ideal Gas Law	East 15	2/2,3
Calorimetry I	East 15	2/9,10
Calorimetry II	East 15	2/16,17
Thermal Expansion	East 15	2/23,24
Simple Harm. Motion	East 15	3/2,3
Waves & Resonance	East 15	3/9,10
Sound Waves	East 15	3/23,24
Optics: Selection	East 15	3/30,31
Optics: Experiment	East 15	4/6,7
Optics: Prepare Presentation	East 15	4/13,14
Optics: Presentation	East 15	4/20,21
Possible make-up lab	East 15	4/27,28

Conducting a Laboratory: At each session, there will be a brief introduction to the relevant material and an explanation of how to handle particular pieces of equipment. It is the students' responsibility to set up, perform, and analyze or interpret experiments: ask questions about any aspect of the experiment or the underlying physics that is unclear.

Laboratory Manual: The PHY275 Laboratory Manual (purchasable at the URI Bookstore) contains detailed descriptions of scheduled experiments.

Laboratory Notebook and Grades: Performance in the PHY275 Lab will be based on Lab Notebooks: there will be no other written reports. You must use a Computation Notebook #43-648 or Laboratory Research Notebook #43-643, or equivalent (quad ruled for graphs, sequentially numbered pages bound to stay) - NOT spiral bound or 'notepad'. Such a notebook from previous semester usage in PHY273 and PHY274 is suitable for use here, (also available at the URI Bookstore and at the Rhode Island Book Company).

For each experiment, your Lab Notebook must include the following items (each item worth 20 points of 100 possible point total):

- A sketch of the apparatus with significant dimensions indicated and a brief description of its purpose.
- The data from measurements recorded in tabular form including the appropriate units.
- Graphs appropriately labeled and accompanied by explanatory captions.
- An error analysis of each observation and a statement of how these errors affect the uncertainty of the final result.

(e) A discussion and interpretation of the results obtained.

Make-up Labs: Zero points are assigned for any session missed. If you have a legitimate reason to miss a laboratory session, you may ask (in advance) permission to participate in another laboratory section or to do the experiment (***only one***) during the make-up week.