

## Welcome to Phys102, Spring 2007

### Instructors:

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**Announcements:** On the Physics 102 web page and sometimes duplicated on the bulletin board outside the Physics and Astronomy Department office, Herzstein Hall 105.

**Web page:** <http://www.owl.net.rice.edu/~phys102/>

**Text and calculator:** The text for Physics 102 is *Physics for Scientists and Engineers* by Fishbane, Gasiorowicz, and Thornton. This course will cover the material contained in Chapters 21-34 of this text and assumes familiarity with the material covered in Physics 101.

You are responsible for the required text material whether or not it is treated in class, unless otherwise specified. You should have a hand-held scientific calculator for use in doing calculations in quizzes, homework, tests, and exams. It doesn't need to be programmable, but it should compute trigonometric and exponential functions.

**Other Texts:** Other elementary physics texts are available on the Physics 101/102 shelf on reserve at the Fondren Library.

**Class Meetings:** MWF 9 AM. These periods will be devoted to lectures that systematically introduce a particular set of ideas, demonstrations that illustrate these ideas and peer-discussion sessions on conceptual aspects of these ideas.

**Pledged problems:** Pledged homework problems will be handed out periodically (approximately weekly) in class. These problems are intended to give you some experience in working, completely on your own, problems that you may not have seen before and are typical of those that will appear on exams. In working on the pledged problems, you may consult your own notes and your own textbook, but you may get no other help. There will be a generous time limit (2 hours), at one sitting, for preparing your solution. Your solutions to these problems should be **folded vertically with your name, the assignment number, and your start and finish times on the outside**. The pledged problems should be placed, before the deadline (usually Monday at 5pm), in the boxes marked Phys 101/102 in the Physics Lounge. **Pledged homework submitted after the deadline will not be accepted.** The solution to pledged problems will be posted on the Phys102 web site after they are due. Graded pledged problems will be returned in the boxes across from the bulletin board.

**Suggested problems:** Periodically, we will also list a number of suggested problems taken from those at the end of the chapters in the text and other sources. These will provide experience in problem solving and in using the concepts discussed in the course and will prepare you for the pledged problems. You are encouraged to discuss these suggested problems with fellow students, tutors, and instructors. You are not required to turn these problems in for credit. If you choose to do so the final solution you turn in should be your own work and not copied directly from another student. However, a pledge is not required. A randomly chosen subset of these problems will be graded, and this grade may be applied towards your grade from the tests as specified below. Your solutions to these problems should be **folded vertically with your name and the assignment number on the outside** and then placed, before the specified deadline (usually Friday at 5pm), in the boxes marked Phys 101/102 in the Physics Lounge. The solutions to these problems will be available on the Phys102 web site after this deadline. Late submissions will not be accepted.

**Tutorial sessions:** There will be weekly help sessions at times to be determined shortly. Students will work together in cooperative groups on the suggested problems under the guidance of an instructor. These sessions are intended to help in developing skills in solving physics problems. These sessions are not mandatory. However, if you sign up for these sessions and actively participate; you will be given credit towards your grade from the pledged problems as specified below. All students are welcome to attend these sessions; however, only those who sign up for them may receive credit for doing so. Sign-up sheets are available in the physics office; enrollment is restricted so please sign up as soon as possible and certainly by Wednesday, January 17, 2007.

**Quizzes:** Short (20 minute) quizzes will be administered online via the [WebCT](#) system (accessible from the Phys102 web site) approximately weekly. An announcement will be made in class, on the web site and the email discussion list (Freshphys) when a new quiz is available. You will have at least 72 hours within which you may take the quiz. You may attempt each quiz twice. The first time you take the quiz you may only have blank scratch paper and a non-programmed hand calculator with you and you may not consult anyone for help. If you choose to take the quiz the second time, you may use the textbook and your notes before and during the quiz. You may not consult anyone for help either before or during the quiz. Your grade for the quiz will be the average of your scores on the two attempts. It is not necessary to take the quiz twice. You must make both attempts at the quiz during the time window indicated, but there must be at least 30 minutes between attempts.

**Tests and Final Examination:** 90-minute tests will be given at 7:45 am on Thursday, February 15 and Thursday, March 29. There will also be a three-hour comprehensive **final examination** that will be **scheduled by the registrar**. Non-programmed hand calculators may be used on tests and the examination but no books or notes will be allowed. Solutions to tests and the final examination will be posted with the homework solutions. Historically, the median class score on tests and examinations has ranged from about 50% to 70%. Typically, there is a mock-test review session the night before the exam in place of tutorial sessions that week.

**Grading:** Grading of tests and homework is based on what you actually write down. Ordinarily, the answer to a problem by itself, even if that answer is correct, is not sufficient to obtain full credit. You must demonstrate that your method of solution is correct. The reader should be able to determine, without guessing, the steps you took to arrive at a solution.

**Calculation of semester grade:** Your semester grade will be determined from an average that will be weighted as follows:

- Two tests 30%
- Final Exam 20%
- Pledged problems 20%
- Quizzes 15%
- Laboratory 15%

Your two lowest pledged problem grades will be dropped, and your lowest quiz grade will be dropped. You should retain all your tests, pledged problems, suggested problems, and the final exam so that you can confirm the accuracy of our records, which we will post periodically and at the end of the semester. Students who receive a weighted average greater than 85% will receive a grade of at least A- while those obtaining weighted average greater than 70% will receive a grade of at least B-. We may lower these cut-offs at the end of the semester, but we promise we will not raise them.

**Redemption credit:** Redemption credit will be determined as follows. The solutions to the pledged problems alone can earn the full 20%, if all are turned in and receive full credit. However, students receiving less than full credit may redeem up to 3 points or 3% of the total course grade, by attending the tutorial sessions. To receive these points, you must sign up for the tutorials, attend them, and participate actively. The total for the pledged problems, including redemption points, cannot exceed 20%.

In addition, students may receive up to 5 redemption points, or 5% of the total course grade, based on the grades received for the suggested problems. Students are not required to attend or sign up for the tutorials in order to receive credit for the suggested problems. Redemption points for suggested problems will be applied toward the two mid-term tests or the final examination. The total grade for the mid-term tests plus final exam, including redemption points, cannot exceed 50%.

**Re-grade policy:** Do not write in a graded exam book or homework problem after it has been returned to you. If, after consulting the solutions we have prepared, you feel that your work was not correctly graded, please direct our attention to the specific parts to be reconsidered by means of a note on a separate sheet stapled to your paper. In your note, give your reasons for requesting a re-grade, and submit it to your instructor within one week after the solutions were posted. We will review the grading of the part to which you direct our attention, and possibly the rest of the paper, and re-determine the grade that the paper deserves.

**Make-ups and excused delays:** Make-ups for missed quizzes, pledged problems, tests, or laboratories will be given at the discretion of the instructor. You may be excused without penalty or be allowed a delayed make-up of quizzes, pledged problems or tests if one of the following two conditions is met:

1. You are on official university business or you have a conflicting class, and you notify us well beforehand. If you have a conflicting class, a signed note from the instructor of that course is required stating that you actually attended class on the day of the test.
2. You have a serious reason beyond your control, such as your illness or a death in your family, and you get word to us immediately. As soon as possible write out a statement giving the reason for your absence, sign it, and give it to your instructor. (The policy on laboratory make-ups is stated in the lab manual.)

**Help:** All students are welcome to attend the tutorial sessions (at times and locations to be announced). Tutoring within the framework of the Rice Tutorial Program will be available. There may be tutorial help provided in your College, by the Society of Physics Students, or others.

**Students with Disabilities:** If you have a disability and desire accommodations for this disability in this course, please contact your instructor as soon as possible and certainly within the first two weeks of class; in addition, please contact the Disabled Students Services office in the Ley Student Center [adarice@rice.edu](mailto:adarice@rice.edu) or at 713-348-5841 during the first two weeks of class so that timely and appropriate arrangements may be made.

**Freshphys:** You are encouraged to sign up for the Phys102 email distributions list Freshphys. This discussion list functions as cyber-office-hours, asynchronous discussion section, electronic bulletin board, etc. To subscribe, visit the Freshphys listserv website at the following web address: <https://mailman.rice.edu/mailman/listinfo/freshphys>.

If you have any questions or comments about the course, the grading, the problems, or the physics, we would like to hear from you. You will be welcome most of the time if you show up in our offices, and we will try to accommodate you if you show up unannounced (but it makes sense to call ahead). Please feel free to send email at any time – we will try to respond as quickly as possible. Please also feel free to use Freshphys, the email discussion list.

**Laboratory:** The laboratory is an integral part of the course. You must complete and return a scheduling sheet to Dr. Dodds's office by the deadline given on the sheet in order for us to take into account your scheduling preferences. You do not have to register separately with the university registrar for it. Performing the laboratory experiments is very important and missing a laboratory is a prescription for loss of credit. Laboratory policies will be presented in more detail in the written materials you will receive for the laboratory.

**The Honor System:** The Rice Honor System applies to all work in the course, the suggested problems excepted. The Pledge must be written in full and signed on the pledged problems, tests, the final examination, and any other work that has been announced as pledged. Other Honor System items:

1. Seating in tests and exams should be as the Honor System recommends: alternate rows and alternate columns in classrooms, or as otherwise directed by the person administering the test or examination.
2. Test or examination papers should not be taken from the examination room without the permission of the person administering the test or examination. If you have a special problem with taking a test in the place to which you have been assigned, please let us know.