

Welcome to PHYS 102, Spring 2010

CONTACT INFORMATION

Lecturers

Dr. Timothy Gilheart,
Herzstein Hall 112, ext. 2219, gilheart@rice.edu

Prof. Jabus Roberts,
Herman Brown Hall, ext. 5941, roberts@rice.edu

Laboratories

Dr. Stanley A. Dodds, Herzstein Hall 109, ext. 2510, dodds@rice.edu

Administration/starting point for questions:

Mario Patrenella, Herzstein Hall 105, ext. 2579, mlp2@rice.edu

COURSE INFORMATION

Announcements: Primarily available on the Physics 102 Owl-Space page under the "Announcements" tab, often e-mailed, and reproduced when useful on the regular course website.

Web page: <http://www.owlnet.rice.edu/~phys102>

OWL-SPACE: <http://owlspace.rice.edu>

Text and Calculator: The text for Physics 102 is *Physics for Scientists and Engineers 3rd Edition* by Fishbane, Gasiorowicz and Thornton. This course will cover the material contained in Chapters 21 - 34 of this text, not necessarily in sequence, so be sure to note the order of topics on the syllabus.

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, and exams. It does not need to be programmable, but it should compute trigonometric and exponential functions.

Other Texts: Other elementary physics texts can be made available. Discuss this issue with Dr. Gilheart, should the need arise.

Class Meetings: MWF 9. 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 the ideas.

Laboratory: The laboratory is an integral part of the course. You must complete and return a scheduling sheet to the Dr. Dodds's office by the deadline given on the preference 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 are presented in more detail in the laboratory manual available on the course website at: <http://www.owlnet.rice.edu/~phys102/Lab/Lab.html>
All questions related to the laboratories should be directed to Dr. Dodds.

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 contact us in advance). Please feel free to send an email at any time - we will try to respond as quickly as possible.

Owl-Space: *Registering for PHYS102 automatically registers you for the PHYS101 site on Owl-Space.* More information about Owl-Space can be obtained at <http://owlspace.rice.edu>.

COURSEWORK AND GRADING

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 can get no other help. There will be a generous time limit (2 hours), at one sitting, for preparing your solution. Your solution to the pledged problems should be placed, before the deadline (usually Monday at 5 PM), 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 website after they are due. Graded pledged problems will be returned in the boxes across from the bulletin board. Students will note the date and time of beginning and completion of the problems on the cover sheet; instructions will appear on the pledged problems handouts.

Suggested Problems: Approximately weekly, on the PHYS102 Owl-Space page, we will list a number of suggested problems taken from the end of the chapters in the text. 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 can be applied as redemption credit towards your grade from the tests as specified below.* Your solutions to these problems should be placed, before the specified deadline (usually Friday at 5 PM), in the boxes marked Phys 101/102 in the Physics Lounge. The solutions to these problems will be available on the PHYS102 website after this deadline. **Late submissions will not be accepted.**

Quizzes: Short (intended to take about 30 minutes) quizzes will be administered online via Owl-Space approximately weekly. An announcement will be made in class and on Owl-Space when a new quiz is available. You will have at least 48 hours within which you can take the quiz. You can attempt each quiz once. You may use a non-programmed hand calculator, the textbook, and your notes during the quiz. You cannot consult anyone for help, but may ask an instructor for clarification or to notify us of an error.

Tests and Final Examination: 90-minute tests will be given at 7:45 AM on Thursday, February 18th and Tuesday, March 31th. 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 final examination but no books or notes will be allowed. Solutions to tests and the final examination will be posted on the PHYS102 Owl-Space page. Historically, the median class score on tests have ranged from about 50% to 70%. Typically, there is review session hosted by an instructor or the tutorial leaders a few days before the exam.

Grading: Exam and homework grades are 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.**

Regrading 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.* To insure consistency, 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.

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 and quiz grades 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 on Owl-Space 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 a 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 will not raise them.

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, alternate seats 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.

REDEMPTION CREDIT AND COURSEWORK MAKE-UP

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 can 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 can receive up to 5 redemption points, or 5% of the total course grade, based on the grades earned by submitting their work on 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 combined grade for the two mid-term tests and the final examination. The total grade for the mid-term tests plus final exam, including redemption points, cannot exceed 50%.

Finally, students may receive up to 3 redemption points, or 3% of the total course grade, by contributing substantive and physics-oriented comments (maximum 10) to the Owl-Space discussion forum, *Physics 102 in the Real World*. **Discussion topics will be posted regularly (typically whenever a new Pledged Problem set is available), and will remain open for a week.** These topics will connect the lecture topics to recent events in the news or instances from everyday life. Additional credit may be given for participation in any surveys collected for statistical purposes, at a rate of one discussion post credit per survey completed. Redemption points for discussion posts will be applied toward your quiz grade. The total grade for the quizzes, including redemption points, cannot exceed 15%

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 will be handled online via Owl-Space. Size limits for each session are determined by the available rooms, so please sign up as soon as possible to insure you receive your preference. Tutorials will begin the week of Jan. 18, so be sure to submit your preferences before then.

Help: All students are welcome to attend the tutorial sessions (at times and locations to be announced). Besides office hours, there may be additional tutorial help provided in your College, by the Society of Physics Students, your College Fellows, or others.

Make-ups and Excused Days: Make-ups for missed quizzes, pledged problems, tests, or laboratories will be given at the discretion of the instructor. You can 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 own illness or a death in your family, and you get word to us immediately. As soon as possible, notify your instructor in writing or by e-mail. (The policy on laboratory make-ups is stated in the lab manual available on the course website: <http://www.owl.net.rice.edu/~phys102>)

STUDENTS WITH DISABILITIES

Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with the instructors during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Allen Center (e-mail: adarice@rice.edu, phone: 713-348-5841) during the first two weeks of class so that timely and appropriate arrangements may be made.