# General Physics II: PHY112/186 (sections 1, 2)

## INFORMATION AND INSTRUCTIONS IN SYLLABUS SUBJECT TO CHANGE BY IN-CLASS OR E-MAIL ANNOUNCEMENTS

**INSTRUCTOR:** André van Tonder, andreuri2000@uri.edu, East Hall 317B

**OFFICE HOURS**: The hour before class, the hour after class, or by appointment

**TEXT:** *Physics: Cutnell & Johnson*, published by John Wiley and Sons, any edition. Another good text that is pretty much equivalent is *Physics: Principles and Applications,* by *Douglas C. Giancoli,* any edition. Those of you who bought lifetime access to the Cutnell and Johnson electronic textbook through the Webassign homework system last semester should continue to have access to it there. I have not added the electronic version of Cutnell and Johnson to Webassign this semester since they increased the price by a lot and removed the problems-only subscription option.

**COURSE CONTENT:** Chapters 16-27

**HOMEWORK:** Homework will be administered through the Webassign (webassign.net) homework management system. Access to Webassign will be free this semester since you won't have to subscribe to the electronic version of the textbook to use Webassign. You have to create a Webassign student account (**unless you already have one**) and self-enroll in the homework for this class using the class key

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by following the instructions at webassign.net.

Homework is due on Fridays at 11pm. **The first homework is due on Friday February 3rd** – please enroll well before this date in case of technical problems with enrollment.

You are allowed five submissions to get each question right. Unless stated otherwise, **you may round numerical answers to three significant figures, meaning, for example, that 0.0012345 can be rounded to 0.00123 but not to 0.0012.** It is advisable to plan to finish the assignment a couple of days before its due time to allow extra time, if needed.

**EXAMS**: During the exams you are allowed to use a formula sheet and your calculator. The formula sheet is anything you'd like to write on one side of an 8x11 sheet of paper. No additional books or references are allowed. Exams take place during class time.

**FINAL EXAM:** The final exam is a three-hour exam, and it is cumulative.

Unit exam dates (**dates and content provisional**):

Fri. Feb. 24 – Ch. 16-17 (or as announced)
Fri. Mar. 31 – Ch. 18-20 (or as announced)
Fri. Apr. 28 – Ch. 21,22, 24 (or as announced)

**GRADES**: 93 A, 90 A-, 87 B+, 83 B, 80 B-, 77 C+, 73 C, 70 C-, 65 D+, 60 D, <60 F

**GRADING:** Unit Exams 45%, Final Exam 15%, Homework 40%

# PHY186 Lab Guide

**Lab Manual:** The Physics 186 Laboratory Manual may be purchased from the URI Bookstore in the Memorial Union. You must bring the manual to lab each meeting.

**Content:** Phy186 consists of 9 experiments**. All experiments are to be recorded in a permanently bound notebook (not spiral-bound, though). You may use the same notebook you used for Phy185.** You will not get credit for labs that are not recorded in the notebook. Your name should appear on the cover of the notebook.

**Lab Reports:** Lab reports should be finished during the lab period.

**TITLE:** State the title of the experiment, date of the experiment, your name, and the names of your lab partners.

**NOTES:** While doing the experiment, use this section to make notes, perform calculations, and record your data. If you need to make graphs, they should appear in this section. Only after completing the lab should you continue with the rest of the lab report.

**PURPOSE:** What was the purpose of the lab? What were you trying to measure? Briefly describe the experimental procedure.

**RESULTS:** State your results and include a calculation of the % error (if applicable).

**ERRORS:** This section is a brief discussion of possible sources of errors.

**Grades:** 93 A, 90 A-, 87 B+, 83 B, 80 B-, 77 C+, 73 C, 70 C-, 65 D+, 60 D, <60 F

**Missed Labs:** In the event of a missed lab, it's best to produce documentation of the reason for absence.

**Lab Partners:** As permitted by lab instructor

**Date/Experiment:**

Lab #1: Feb 1-2, Standing Wave on a String
Lab #2: Feb 8-9, Standing Sound Waves
Lab #3: Feb 15-16, Electric Field Mapping
Lab #4: Feb 22-23, Parallel-Plate Capacitor
Lab #5: Mar 1-2: Resistors in Electric Circuits
Lab #6: Mar 8-9, Measurement of the Earth's Magnetic Field
Lab #7: Mar 22-23, Reflection and Refraction
Lab #8: Mar 29-30, Lenses and Mirrors
Lab #9: Apr 5-6, Interference and Diffraction