

Physics 114, Fall 2006, G. E. Matthews

Welcome to Physics 114, General Physics.

Description

Physics 114, General Physics II, is the second semester of a two-semester survey of the principal topics of physics, including

- Electricity and magnetism
- Electronics
- Optics
- Atomic physics and quantum mechanics
- Nuclear physics
- Particle physics (if we have time)

An understanding of calculus and of the topics of Physics 113 is assumed.

Goals

My goals for the course are to have you:

- Learn the concepts of physics;
- Learn what science is and how science progresses;
- Learn to explain many everyday phenomena;
- Learn to think analytically and logically;
- Learn to articulate scientific arguments;
- Find the world a more interesting place.

Toward that end, physics concepts will be presented in the context of real-world examples, applications, and demonstrations. You will learn to explain many things around you using only a few fundamental concepts. You will discover that science is a process, rather than a set of results. The class will be highly interactive, as we seek to do science. We will develop models and theories, based on observation of classroom demonstrations.

Text

Serway and Jewett, 6th edition, Thomson Publishing.

Homework

Working homework is essential to understanding physics. Your performance on the tests is determined almost completely by the effort you bring to working homework. Expect to work hard on homework.

Homework is assigned and submitted through WebAssign (<http://webassign.net>). If a license is not included with your new text, you will need to purchase a WebAssign license within two weeks. Licenses are available at the bookstore. You can also purchase them directly from the WebAssign web site with a credit card.

Login information:

- Username: same as your Wake Forest username.
- Institution: wfu.
- Password: your Wake Forest student ID number.

Homework is due on the date specified in WebAssign. Initially, reading quizzes will be due the class after they are posted, and “homework” will usually be due the second class after posting. (This time interval may change.) Homework will not be accepted late.

Correct answers are available at the site after the deadline for homework comes due.

I permit and encourage forming study groups for working homework. Copying another student's homework is wrong, but collaboration is not. Your homework should always represent your own efforts.

Tutorials

Regularly scheduled tutorial sessions will be announced that will provide opportunities for help in working problems or understanding concepts.

Laboratory

A weekly laboratory is an important part of this course.

You must pass the lab to pass the course. You must pass the lab to pass the course. You must pass the lab to pass the course.

Your lowest lab grade is dropped. This means a single absence from lab would not significantly affect your grade. There are no make-up labs, so save this for an emergency. Please see the accompanying document on laboratory grading. Be sure to bring your lab manual to every lab.

University-excused absences from lab: If you have two university-excused absences from lab, you may drop an additional grade for the second of these missed labs. If you must miss more than two labs under a university excuse, you must make arrangements to make up these labs at least one week prior to the absence. Note that if you drop any lab grade for an excused absence, you cannot drop an additional grade for an unexcused absence.

Attendance

Classroom participation is expected. Excessive absences will adversely affect your final grade. If you do not plan on coming to class, do not take this course.

Excused absences: Please send me e-mail well in advance notifying me of any class you will miss with a University-approved excuse. If there is test that day, you must also give me a copy of the excuse. Be sure to arrange for a make-up before the test. Homework and reading quizzes are still due at the normal time even if you are on university travel.

Hour Tests

Three tests are given during the course of the session. Alternate test times are normally given only in the event of infirmity confinement. Please notify me of such a problem prior to the test.

Test dates

- Sept. 18.
- Oct. 18.
- Nov. 17.

Final examination

The final examination will be given only at the regularly scheduled time as specified in the class schedule published by the Registrar's Office. There will be no alternate exam times. Please notify your siblings not to have wedding rehearsals on this date. Please notify your grandmother that you cannot attend her retirement dinner at this time.

Grading

Your final grade will be composed of the following contributions:

- Final exam: 25%*
- 3 Tests: 50%*

- Homework: 15% **
- Lab: 10% ***

*The lowest test grade will count only one-half as much as the other two test grades. However, if your final exam grade is lower than any test grade, all test grades will be kept and the final will count the same as each of your tests, with all the test and exam scores accounting for 75% of your final grade.

**Your lowest homework grade is dropped.

***Your lowest lab grade is dropped.

Office hours

- 9:00 - 10:30 a.m. Tuesday
- 9:00 - 10:30 a.m. Thursday

These are just the times you can generally expect to find me in my office without a conflict, but I am on campus nearly every day all semester from about 8:30 a.m. until 6:00 p.m. If the posted office hours do not fit your schedule, give me a call and I can usually see you immediately or quickly at another time.

The Net

Class information will be available through the Physics 114 Web page, <http://www.wfu.edu/~matthews/courses/phy114>.

You may also mail me directly at matthews@wfu.edu.

Pandemic Plan

Our pandemic plan will be distributed within two weeks. It will provide means of continuing the course in the event the university closes.