

SYLLABUS FOR PHY-101: Introduction to Physics

Spring 2009

INSTRUCTOR: Dr. Gary B. Adams

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CLASSES:

OFFICE HOURS: (Tentative)

PHY 101 8:35- 9:25 MWF PSF-101

3:05- 3:55 MWF PSF-462

PHY 101 9:40-10:30 MWF PSF-101

2:50- 3:40 TTH PSF-462

PHY 111 10:30-11:45 TTH PSF-101

2:00- 2:50 M PSH-352 Help-Study

NOTE: All Office Hours are open to all of my students.

I. INTRODUCTION

PHY-101 is an introductory physics course for students with no background in physics and a limited background in mathematics. Students are assumed to know some limited physical science and elementary algebra.

The main topics of PHY-101 are Newton's Laws of Mechanics, Conservation of Energy, and Basic Electromagnetism. A detailed list of topics can be found on the lecture schedule which accompanies this syllabus.

The textbook is *Conceptual Physics* (10th edition) by Paul G. Hewitt (Addison-Wesley 2006). Reading assignments are keyed to this textbook. Labs are available for free download on our course website. Also required is a CPS (Classroom Performance System) transmitter, available at the bookstore. The online homework system for this course is WebAssign. WebAssign access cards are available from the ASU Bookstore (find a xeroxed WebAssign sheet for PHY101 in the Physics section and carry that to the check-out register); alternatively, WebAssign access may be purchased online with a credit card.

II. POLICIES

A. General

The course during this Semester commences on WED Jan. 21 and concludes on MON May 4. The course work will consist of three lectures each week in room PSF-101, plus a two-hour laboratory session and a one-hour recitation session each week. The lectures will present an introduction to the basic interactions between the particles that make up our universe, and examine the quantities that change, or do not change, as a result of those interactions.

The principal methods of scientific investigation will be examined in the laboratory. The recitation provides an opportunity to learn and practice problem-solving skills in a smaller group setting. The lab, lecture, and recitation combine to make a four-hour course; you must attend and successfully complete each part of the course. A complete schedule of lectures (with tests and reading assignments), recitation quizzes, and labs is distributed with this syllabus. All homework assignments will be done online, but some of these will also be turned in at recitation; homework assignments are available only at your WebAssign web site (find this by going to our course web page).

Lectures are on MWF from 8:35 until 9:25 or from 9:40 until 10:30 in PSF-101. Students are responsible for any information imparted to the class during lectures. Minimal preparation for lecture is to do the reading assignment for that day. To more fully prepare for lecture, also take an advance look at the homework problems which will be assigned for that lecture. A number of Multiple Choice questions will be asked during each lecture. These may cover the reading assignment, or may check your comprehension of some topic that I have just covered in lecture. You are expected to record your response to these questions using your CPS (Classroom Performance System) transmitter. You must register your CPS transmitter in order for your responses to be graded. A guide to CPS, including instructions for registering your transmitter, can be found at the course web site. **YOU MUST USE ONLY THE TRANSMITTER THAT YOU REGISTER AND NO OTHER.** Use of another student's transmitter is a case of academic dishonesty, just exactly like cheating on a test. Any and all students involved in any such incidents will automatically receive an E for the course, and may be referred to the Dean for further sanctions.

Detailed lists of policies pertaining to tests and to CPS can be found at the course web site. Please check those official policies before sending a policy question to your instructor or TA.

Recitation sections occur weekly as scheduled. The first recitation meeting is the MON 11:50 recitation on Jan. 26. The last recitation meeting will be the MON 7:30 recitation on May 4. All recitation meetings scheduled in-between and including these two recitation times will meet in their assigned rooms (either F366, H360, or H355). This schedule results in 13 recitation meetings for every student. The purpose of the recitation section

is to give the student an opportunity in a small class environment to learn essential concepts and problem-solving strategies. Some recitation periods will open with a short quiz. In addition, all written homework must be turned in at recitation.

Detailed lists of policies pertaining to quizzes and to homework can be found at the course web site. Please check those official policies before sending a policy question to your instructor or TA.

Laboratory Sessions occur weekly as scheduled beginning MON Feb. 2. The lab final is scheduled for the week of Apr. 27-29. The purpose of the lab session is to introduce the student to basic principles of scientific investigation. A detailed list of policies pertaining to labs can be found at the course web site. Please check those official policies before sending a policy question to your instructor or TA.

Help-Study Sessions are for the students' benefit, but participation is optional. Beginning MON Jan. 26, the Help-Study Hall (PSH-352) will be staffed by volunteer faculty and Teaching Assistants several hours each day between 8:40 and 3:30. Teaching Assistants associated with this course, and your instructor, will keep some of their office hours in the Help-Study Hall.

An **email** account is available for every student enrolled at ASU. Instructions for obtaining an email account can be obtained at the ASU Computer Commons. Important class information will be disseminated through ASU email. The student will be responsible for receiving it. If you currently have a working ASU email account, then you need do nothing. If you have not recently used your ASU email account, then you should double-check to make sure that your email is properly being redirected to your favorite email address.

B. Final Grades.

The final course grades will be determined with the following weights:

- CPS: 10%
- Online Homework: 10%
- Written Homework: 5%
- Quizzes: 10%
- Tests: 25%
- Labs: 25%
- Final Examination: 15%

The plus-minus grade system will be used. The scale for final letter grades will ultimately be determined by the overall class performance; however, any student with an overall class average of 90% can expect to receive no less than A⁻. You should save all graded materials in the case of an appeal or a misrecorded grade. For information on HOW TO FIGURE YOUR FINAL GRADE see the course web page.

C. Withdrawal

Withdrawal policies are established by the University (see the Spring 2009 Bulletin.) The deadline for course withdrawal is Apr. 3. Incompletes are an alternative offered by the University for students who are succeeding in a course, but who, because of unavoidable circumstances, are unable to complete the coursework in the allotted time. Students who are granted an incomplete must, in general, repeat the course from the beginning and complete all work within one calendar year. You MUST have a passing grade at the time that you request an incomplete, otherwise your request cannot be considered.

Spring 2009 Lab Schedule

Labs Meet Monday to Wednesday

Labs Meet in PSH-365

Dates	Experiment
1/19-1/21	No Lab
1/26-1/28	No Lab
2/02-2/04	Motion
2/09-2/11	Free Fall
2/16-2/18	Newton's Second Law
2/23-2/25	Uniform Circular Motion
3/02-3/04	Energy Conservation
3/09-3/11	Spring Break - No Lab
3/16-3/18	Absolute Zero
3/23-3/25	Standing Waves
3/30-4/01	Speed of Sound
4/06-4/08	Ohm's Law
4/13-4/15	Magnetic Fields
4/20-4/22	Nuclear Energy
4/27-4/29	Lab Final

Beginning Jan. 16, this information, plus course info updates, will be available on the internet at <http://www.public.asu.edu/~gbadams>