

SYLLABUS FOR PHY-101: Introduction to Physics
Spring 2007

INSTRUCTOR: Dr. Gary B. Adams

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|----------|------------------------|----------------------------------|
| CLASSES: | | OFFICE HOURS: (Tentative) |
| PHY 101 | 8:40- 9:30 MWF PSF-101 | 2:40- 3:30 MF PSF-462 |
| PHY 101 | 9:40-10:30 MWF PSF-101 | 2:40- 3:30 W PSF-366 |
| PHY 131 | 1:40- 2:30 MWF PSF-173 | 11:40-12:30 TTH PSF-306 |
| | | 2:40- 3:30 TH 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 a custom text entitled Introduction to Physics (McGraw-Hill 2007); it consists of seven chapters from Physical Science (Seventh Edition) by Bill W. Tillery and 15 labs from the Laboratory Manual for that same textbook, also by Professor Tillery. Reading assignments are keyed to this textbook. Lab pages are perforated; you will tear them from the textbook when doing the relevant experiments. Also required is a CPS (Classroom Performance System) transmitter, available at the bookstore.

II. POLICIES

A. General

The course during this Semester commences on WED Jan. 17 and concludes on MON Apr. 30. 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 ARIS web site class (find this by going to our course web page).

Lectures are on MWF from 8:40 until 9:30 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, beginning MON Jan. 22. The last recitation meeting will be on FRI Apr. 27. 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 (please see the enclosed schedule). 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 Jan. 29. The lab final is scheduled for the week of Apr. 23-37. 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. 22, 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 quota has not been exceeded and 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: 30%
- Labs: 20%
- 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 2007 Bulletin.) The deadline for course withdrawal is Mar. 30. 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 2007 Lab Schedule

Labs Meet Monday to Wednesday

Labs Meet in PSH-365
Except Where Noted as PSH-366

| Dates | Experiment | Room |
|-----------|-----------------------|---------|
| 1/16-1/17 | No Lab | |
| 1/22-1/24 | No Lab | |
| 1/29-1/31 | Motion | |
| 2/4-2/7 | Free Fall | |
| 2/12-2/14 | Newton's Second Law | PSH-366 |
| 2/19-2/21 | Centripetal Force | |
| 2/26-2/28 | Absolute Zero | |
| 3/5-3/7 | Specific Heat | |
| 3/12-3/16 | Spring Break - No lab | |
| 3/19-3/21 | Standing Waves | |
| 3/26-3/28 | Speed of Sound | |
| 4/2-4/4 | Ohm's Law | |
| 4/9-4/11 | Magnetic Fields | |
| 4/16-4/18 | Nuclear Energy | |
| 4/23-4/25 | Lab Final | |

Beginning Jan. 22, this information, plus course info updates, will be available on the internet at <http://www.public.asu.edu/~gbadams>