

SYLLABUS FOR PHY-101: Introduction to Physics

Spring 2020

INSTRUCTOR: Dr. Gary B. Adams

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CLASSES:

OFFICE HOURS:

PHY 101 9:00-10:15 TTH PSF-101

To Be Determined - Start MON 1/13

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

5 or 6 hours total - On MTWTH

PHY 121 3:05- 4:20 MW PSH-356

See Webpage for Latest Info

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 Fundamentals by Paul G. Hewitt (Pearson Addison-Wesley 2008). Reading assignments are keyed to this textbook. Labs are available for free download on our course website. Also required is a Turning Point transmitter (available at the bookstore) or Turning Point ResponseWare software. The online homework system for this course is WebAssign. WebAssign access is most cheaply purchased online, at WebAssign; alternatively, WebAssign access cards are available from the ASU Bookstore (in the Physics section, find a xeroxed WebAssign sheet which is marked PHY101 and carry that to the check-out register).

II. POLICIES

A. General

The course during this Semester commences on TUE Jan. 14 and concludes on THU Apr. 30. The course work will consist of two 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 a 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 WebAssign (see our course web page).

Lectures are on TTH from 9:00 until 10:15 or from 10:30 until 11:45 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 Turning Point transmitter or software. You must register your Turning Point transmitter or software in order for your responses to be graded. A guide to Turning Point, including instructions for registering your transmitter, can be found at the course web site. **YOU MUST USE ONLY THE TRANSMITTER OR SOFTWARE THAT YOU REGISTER AND NO OTHER.** Use of another student's transmitter or software 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 Turning Point 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 with the TUE 3:00 recitation on TUE Jan. 21. The last recitation meeting will be the MON 11:50 recitation on MON Apr. 27. 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 (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. 27. The lab final is scheduled for Apr. 27 - 28. 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 TUE Jan. 21, the Physics Success Center (PSF-186) will be staffed by volunteer faculty and Teaching Assistants several hours each day between 9:00 and 5:00. Teaching Assistants associated with this course will keep some of their office hours in the Success Center.

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:

- Turning Point: 10%
- Online Homework: 10%
- Written Homework: 5%
- Quizzes: 10%
- Labs: 25%
- Tests: (best 2 of 3) 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 2020 Bulletin.) The deadline for course withdrawal is Apr. 5. 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.

D. Appendices

Additional, University-required information on commercial note-taking, accommodations, classroom behavior, and withdrawal details can be found in the Online Appendix.

Spring 2020 Lab Schedule

Labs Meet Monday to Tuesday

Labs Meet in PSH-365

Dates	Experiment
1/13-1/14	No Lab
1/20-1/21	No Lab
1/27-1/28	Motion
2/03-2/04	Free Fall
2/10-2/11	Newton's Second Law
2/17-2/18	Uniform Circular Motion
2/24-2/25	Energy Conservation
3/02-3/03	Absolute Zero
3/09-3/10	No Lab
3/16-3/17	Standing Waves
3/23-3/24	Speed of Sound
3/30-3/31	Ohm's Law
4/06-4/07	Magnetic Fields
4/13-4/14	Faraday's Law
4/20-4/21	Nuclear Energy
4/27-4/28	Lab Final

Beginning Jan. 14, this information, plus course info updates, will be available on the internet at <http://www.public.asu.edu/~gbadams>