

PHYSICS 101

Spring 2012

Laboratory Syllabus

Laboratory Instructor/Supervisor: Dr. Harry Downing, Department of Physics and Astronomy

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Office Hours: 11:00-11:40 MWF; 10:00-11:30 TR; 2:30-3:30 TWR, or by appointment/Science Room 322B

Co-Laboratory Instructor/Supervisor: Mr. Ali Piran, Department of Physics and Astronomy

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Office Hours/Office: 2:00-4:00 pm MTW or by appointment/Science Room 327

Physics Homepage: www.physics.sfasu.edu

Lab Course Home Page: <http://www.physics.sfasu.edu/downing/101LabSyllabus.htm>

Text: PHY 101 Laboratory Manual (only sold in local bookstores)

Lab meets in Room 316 Miller Science at the following times:

Mondays – Sec 20 (12:00-1:50), Sec 21 (2:00-3:50), Sec 22 (4:00-5:50), Sec 23 (6:00-7:50)

Tuesdays – Sec 24 (12:30-2:20), Sec 25 (2:30-4:20), Sec 26 (4:30-6:20), Sec 27 (6:30-8:20)

Wednesdays – Sec 28 (12:00-1:50), Sec 29 (2:00-3:50), Sec 30 (4:00-5:50), Sec 31 (6:00-7:50)

Thursdays – Sec 32 (12:30-2:20), Sec 33 (2:30-4:20), Sec 34 (4:30-6:20), Sec 35 (6:30-8:20)

COURSE CALENDAR

<u>Week of</u>	<u>Experiment</u>	<u>Week of</u>	<u>Experiment</u>
Jan 23	Superposition of Waves	Mar 5	Telescopes
30	The Vibrating String	19	Graphing
Feb 6	The Organ Pipe	26	The Simple Pendulum
13	Types of Spectra	<u>Apr 2*</u>	<u>Addition of Vectors</u>
20	The Ray Box: Part One	16	Linear Momentum
27	The Ray Box: Part Two	23	Centripetal Force

***Thursday labs will do this experiment on April 12.**

Note: Your lab final exam will be given with your lecture final exam.

MATERIALS

Each student MUST bring the following supplies to every lab session.

1. Pencil and eraser
2. Laboratory Manual (PHY 101 only sold in local bookstores)
3. Calculator (bring to every lab!)

(If you do not bring the required supplies for a particular lab, you will not be able to complete the lab.

Please don't forget to bring them!)

CLASSROOM POLICIES

Each day's lab begins with a brief presentation by the teaching assistant (15-30 minutes). Important instructions, theory, and procedures for completing the lab exercise are given at that time. At the conclusion of the presentation students will then complete the lab exercise under the guidance of the lab assistant.

1. Come prepared! Read over the lab exercise before coming to class (see calendar above) and bring required materials.
2. Review the online PowerPoint show associated with each day's lab at <http://www.physics.sfasu.edu/downing/101LabSyllabus.htm>.
3. Arrive on time to avoid missing important instructions and/or possible pop quizzes!
- 4. All electronic communication devices must be turned off during class.**
5. Each lab must be completed during the lab period.
6. There will be no make-up labs.
7. Transfers are allowed for those with extenuating circumstances. (No transfers are possible in the summer.) (Only Mr. Piran and Dr. Downing can approve transfers.)
- 8. No food or drink allowed in lab.**

COURSE REQUIREMENTS AND GRADING POLICY

1. As mentioned in the General Bulletin and in your lecture syllabus, your **lecture and laboratory grades are computed into one grade, and the same grade is recorded both for your lecture credit (3 hours) and for your lab credit (1 hour)**. The lab accounts for 25% of this overall grade. Half of this 25% will come from the average of your 10 highest experiment grades, and the other half will come from your **lab final which you will take with your lecture final**. This lab final constitutes a major portion of your overall grade in PHY 101. (See lecture syllabus for further information.)
2. Each experiment grade will be based on the experiment and a possible pop quiz. Pop quizzes can include questions over the present as well as the most recent laboratory exercise.
3. Your experiment average will be drastically affected if you have three or more absences and **any** of them are **unexcused**.
4. Experiment grades and absences will be posted each week online. It is your responsibility to check these postings in order to identify errors in the most recently posted grades or absence designations. You have 10 days (2 days in the summer) from the day of each posting to correct any such errors.
5. If you have obtained a permit from the chair of the Department of Physics and Astronomy to take the lab only, then your PHY 101 lab grade (for one hour credit) will be determined thusly: 50% of the grade will be based on the lab experiment average and 50% of the grade will come from the lab final. (To qualify for taking the lab without the corequisite lecture, one must already have credit for the lecture and permission of the department chair.)

ATTENDANCE POLICY/LAB ABSENCES

We realize that occasionally there are legitimate reasons for missing a lab such as illness, family emergency and participation in certain university-sponsored events. Please read the following absence policy carefully.

1. If you will be missing lab because of an approved university-sponsored event, you must inform the laboratory supervisor at least one week before the absence.
2. Students are responsible for providing timely documentation satisfactory to the laboratory supervisor for each absence. You have one week after missing a lab to bring a written excuse for

an absence to Dr. Downing (Room 322B Miller Science Building). If you do not bring a written excuse within one week, the absence cannot be excused.

3. Students will receive a grade of zero for each UNEXCUSED lab absence.
4. Whether an absence is excused or unexcused, a student is still responsible for all course content.

COURSE DESCRIPTION

1 semester hour, 2 hours lab per week. Lecture and laboratory grades are computed into one grade and the same grade is recorded for both lecture and lab. Co-requisite: PHY 101. Lab fee required.

PROGRAM LEARNING OUTCOMES

This is a general education core curriculum course and no specific program learning outcomes for the physics program are addressed in this course.

GENERAL EDUCATION CORE CURRICULUM OBJECTIVES/OUTCOMES

1. To understand and apply method and appropriate technology to the study of physical science.
2. To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry, and to communicate findings, analyses, and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

STUDENT LEARNING OUTCOMES

By the end of the course, successful students will be able to:

- Recognize that the world in which they exist can be described by a few natural laws.
- Demonstrate a basic familiarity with concepts of waves, sound, light, and mechanics.
- Describe natural phenomena in a conceptual manner rather than mathematically.

ACADEMIC INTEGRITY (A-9.1)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

WITHHELD GRADES (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

STUDENTS WITH DISABILITIES

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to <http://www.sfasu.edu/disabilityservices/>.

Students with documented disabilities who need course adaptations or accommodations should schedule an appointment with the instructor as soon as possible.

ACCEPTABLE STUDENT BEHAVIOR

Classroom behavior should not interfere with the instructor's ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, Policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.
http://www.sfasu.edu/policies/student_conduct_code.asp