

PHY 1951 Physics for Scientist and Engineers 1 LABORATORY

Spring 2016

INSTRUCTOR: _____ EMAIL: _____
INSTRUCTOR'S OFFICE: _____ OFFICE HOURS _____
LAB SUPERVISOR: Chris Dunn SUPERVISOR'S OFFICE: MS 3.02.47

COURSE DESCRIPTION

Laboratory accompanies PHY 1943. You will learn how to use modern data acquisition and analysis tools to study classic physics experiments that are the foundations of the world around us. These labs help provide the foundation of solving more complex problems in physics and demonstrate how the fundamentals of physics work, specifically Newtonian mechanics, Conservation of Energy, Conservation of Momentum, rotational motion, and Simple Harmonic Motion.

COURSE GOALS

- *Engage each student in experiments that cover basic physics topics learned in lecture*
- *Develop a broad array of skills and tools of experimental physics and data analysis*
- *Develop team building skills that are vital to success in a professional setting*
- *Critical thinking and analysis of the world around them*
- *By the end of the semester, the students will be able to solve basic physics experiments*

COURSE PREREQUISITES

- Completion of **or** concurrent enrollment in PHY 1943 (Calculus-Based Physics 1)

COURSE TEXTBOOKS AND MATERIALS

- The lab manual, board notes, and appendixes can be found at <http://physics.utsa.edu/physicslab.html>
- You need to bring with you the lab to done that day, a scientific calculator, metric ruler, graph paper, and an USB drive.

COURSE REQUIREMENTS

1. Attendance Policy – **Is mandatory, and you need to arrive on time.**
2. Tardy Policy – If you arrive **15 minutes later, or more** you will be considered absent, and not allowed to attend class. You will receive zeroes for the quiz, and the lab to be done that day. If any work is due that day, you will be allowed to turn it in, but then you must leave the lab.
3. Participation Policy – Students who miss 2 labs will receive at most half credit for lab participation for the semester. Miss 3 labs and the student will receive a zero for lab participation credit for the semester, and **a student missing 4 or more labs will receive and automatic 'F' in the lab course.**
4. Plagiarism – Will not be tolerated, and will result in a zero for that lab report.
5. Late Lab Reports - **Lab reports are due at the beginning of class the next time lab meets.** Any lab that is not turned in at that time will be considered late. If it is turned in later **that same day** it is due it will be 5 points off, and an additional 5 points will be deducted everyday it is late beyond that up to one week, not counting weekends, nor holidays. Lab reports more than a week late will not be accepted, and will be assigned a zero. When turning in late lab reports you must physically hand it to either your lab instructor/TA, or the Lab Supervisor (Chris Dunn). There is no putting it in your TA's mailbox, "sliding it under the lab supervisors' door", nor anything of the kind. Also, lab reports are not accepted via email.
6. Lecture – Students who drop the lecture portion **should** drop the lab course. If you drop the lab it is your responsibility to go online and officially drop the course.
7. Grade Rebuttals – If you think there was an error in grading you have one week to report it to your lab instructor from the time the graded work was returned to you. After this time the grades are considered final.

LAB RULES

1. Cell phones should be turned off and put away.
2. No food or drink allowed in the lab.
3. Students must clean and organize their work area before leaving the lab.
4. Only students enrolled in the class are allowed in the lab room.
5. You are not permitted to leave early unless given explicit permission from the lab instructor, and your group members indicate that you are done with the lab. Leaving before the lab work is completed will result in you being counted absent for that lab.
6. Students are responsible for the lab equipment they use and handle. You break it, you buy it.

COURSE SCHEDULE

Week	Lab
1/11-1/15	Introduction/Significant Figures & Measurements
1/18-1/22	Physics labs do not meet this week
1/25-1/29	Graphing Analysis
2/1-2/5	Vector Addition
2/8-2/12	Position, Velocity, Acceleration
2/15-2/19	Atwood Machine
2/22-2/26	Projectile Motion & Conservation of Energy
2/29-3/4	Collision – Impulse & Momentum
3/7-3/11	Centripetal Force
3/14-3/18	Spring Break
3/21-3/25	Rotational Inertia
3/28-4/1	Archimedes' Principle
4/4-4/8	SHM
4/11-4/15	Standing Waves
4/18-4/22	Review
4/25-4/29	Final Exam
5/2-5/6	Physics labs do not meet this week

GRADE BREAKDOWN FOR THE LABS

Lab reports average	55%
Daily quizzes average	10%
Final exam	25%
Class Participation credit	10%
Total	100%

LETTER GRADE

A = 90 - 100	B = 80 - 89	C = 70 - 79	D = 60 - 69	F = 0 - 59
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When calculating the final course grade the lowest quiz, and lab report grades, which are not due to academic dishonesty, will be discarded. Any zeroes due to academic dishonesty will be kept.

Common Syllabus Information

Counseling Services: Counseling Services provides confidential, professional services by staff psychologists, social workers, counselors and psychiatrists to help meet the personal and developmental needs of currently enrolled students. Services include individual brief therapy for personal and educational concerns, couples/relationship counseling, and group therapy on topics such as college adaptation, relationship concerns, sexual orientation, depression and anxiety. Counseling Services also screens for possible learning disabilities and has limited psychiatric services. Visit Counseling Services at <http://utsa.edu/counsel/> or call (210) 458-4140 (Main Campus) or (210) 458-2930 (Downtown Campus).

Student Code of Conduct and Scholastic Dishonesty: The Student Code of Conduct is Section B of the Appendices in the Student Information Bulletin. Scholastic Dishonesty is listed in the Student Code of Conduct (Sec. B of the Appendices) under Sec. 203 <http://catalog.utsa.edu/informationbulletin/appendices/studentcodeofconduct/>

Students with Disabilities: The University of Texas at San Antonio in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act provides "reasonable accommodations" to students with disabilities. Any student with a disability who is requesting an accommodation for this course must provide the instructor with official documentation in the form of a letter from Student Disability Services. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.utsa.edu/disability or by calling Student Disability Services at (210) 458-4157 (Main) or (210) 458-2945 (Downtown).

Transitory/Minor Medical Issues: In situations where a student experiences a transitory/minor medical condition (e.g. broken limb, acute illness, minor surgery) that impacts their ability to attend classes, access classes or perform tasks within the classroom over a limited period of time, the student should refer to the class attendance policy in their syllabus.

Supplemental Instruction: Supplemental Instruction offers student-led study groups using collaborative learning for historically difficult classes. Supported courses and schedules can be found on the [TRC website](#). You can call the SI office if you have questions or for more information at (210) 458-7251.

Tutoring Services: Tomás Rivera Center (TRC) may assist in building study skills and tutoring in course content. The TRC has several locations at the Main Campus and is also located at the Downtown Campus. For more information, visit the [Tutoring Services web page](#) or call (210) 458-4694 on the Main Campus and (210) 458-2838 on the Downtown Campus.