

Syllabus

Course : Physics 2401 Physical Science Building Room 140
Instructor :
Contact Information: Tel. 665-3525, Physical Science Building room 114, E-mail: xxxx@utpa.edu
Office Hours :
Lab Manual : Hand outs (<http://www.utpa.edu/dept/physci>)

Course Description and Objectives

This is the laboratory component of PHYS2401. It includes three laboratory hours a week to emphasize course concepts based on a calculus-based study of mechanics, wave motion, sound, and fluids for physics and engineering majors. The expected outcomes from the laboratory section of PHYS 2401 are:

1. To be familiar with the scientific method.
2. To gather experimental data using different measuring instruments.
3. To represent data in various forms e.g. tabular, graphical etc.
4. To interpret and analyze data in the light of the objective/s of an experiment.
5. To identify sources of errors in a given experiment and provide suggestions on how these can be minimized.

Student Learning Outcomes for Natural Science Core Curriculum Courses

The two course sequence, PHYS 2401 and PHYS 2402, is designed to enable the student to:

1. understand and apply method and appropriate technology to the study of natural sciences;
2. 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. identify and recognize the differences among competing scientific theories;
4. demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies; and,
5. demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

Students With Disabilities

Students with disabilities are encouraged to contact the Disability Services office for a confidential discussion of their individual needs for academic accommodation. It is the policy of The University of Texas-Pan American to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Disability Services office (DS), University Center #322, 665-7005 or disabilityservices@utpa.edu.

Out Line

Attendance: Attendance is mandatory. Unless otherwise approved by the laboratory instructor and Laboratory Supervisor/Coordinator, upon a 3rd absence (whether excused or unexcused), the student will receive an "F" for the entire course not just the laboratory portion. You may not receive laboratory credit by attending or transferring to another laboratory section without the approval of both the laboratory instructor and the Laboratory Supervisor/Coordinator which are handled only

on a case by case basis. A student who knows that they will miss a laboratory should make arrangements with the laboratory instructor prior to missing the laboratory; otherwise, a student who has missed a laboratory should contact their laboratory instructor immediately. There are no make-up quizzes. A student, by making appropriate arrangement through the laboratory instructor and Laboratory Supervisor/Coordinator, may make-up a laboratory but only by attending one of the other lab sections during the same week in which the laboratory was missed. The student must have the make-up laboratory work assignment signed by the laboratory instructor of the make-up laboratory and the student must turn-in that assignment to their original laboratory instructor by the beginning of their following (next) regularly scheduled laboratory period.

Drop: Dropping this course is discouraged. Do not drop the course unless you have talked to a Counselor first. To drop this course the student may make the request **in person** to the lecture instructor before the drop deadline.

Materials to bring: Laboratory handouts from website.

<u>Grade:</u>	Lab-Report (11)	50%
	Quizzes (5)	25%
	Final Exam	25%
	Coure Course Assesment Pretest	5%
	Core Course Assessment Post-test	1.25%

The Laboratory Report is the section of the laboratory handout where observations are to be recorded and the given questions are to be answered in writing. At the end of the semester only one laboratory report grade may be dropped. Quizzes will usually consist of questions that will cover materials from the previous laboratory. At the end of the semester only one quiz grade may be dropped. The departmental final exam will contain both questions on theory and a practical laboratory in which the individual student will utilize a piece of laboratory equipment or items supplied from a laboratory experiment to answer questions.

Completion of the laboratory class is required to pass the PHYS 2401 course. If you fail the laboratory (grade of less than 65 of 100), you will receive a failing grade for the entire course regardless of your lecture grade.

Student Questions/Concerns: May be directed to the Laboratory Coordinator: Hector Leal, Office: SCIE 3.140, Office Tel.: (956) 665-2185; Email address: lealh@utpa.edu

“The new university policy requires all email communication between the University and students be conducted through the students' official University supplied BroncMail account. Therefore, please use your UTPA assigned BroncMail for any future correspondence with UTPA faculty and staff”.

Tentative LAB – Experiment Schedule

Date	Physics 2401
Jan 17 to Jan 23	Syllabus & Pretest
Jan 24 to Jan 30	Introduction
Jan 31 to Feb 6	Data Analyzis(1D Motion)
Feb 7 to Feb 13	Motion in Two Dimentions
Feb 14 to Feb 20	Static Friction
Feb 21 to Feb 27	Resistive Forces

Feb 28 to March 5	Linear Momentum
March 6 to March 19	Centripetal Forces
March 12 to March 18	No Labs (Spring Break)
March 20 to March 26	Rotational Dynamics
March 27 to Apr 2	Ballistic Pendulum
Apr 3 to Apr 8	No Labs (Easter)
Apr 9 to Apr 15	Harmonic Motion
Apr 16 to Apr 22	Resonance
Apr 23 to April 29	Lab Finals

Note: Lab Final Exam will be on week of April 23 to April 29 during lab time in lab room.