

## Syllabus

**Course** : Physical Science 1421 Science Building Room 3.144  
**Instructor** :  
**Contact Information:** Tel. 665-3525, Physical Science Building room 114, E-mail: x@utpa.edu  
**Office Hours** :  
**Text** : Handouts (<http://www.utpa.edu/dept/physci>)

### Course Description and Objectives

PSCI 1421 is the first course in a two-course sequence, PSCI 1421 and PSCI 1422, designed to introduce non-science and elementary school pre-service teacher majors to the concepts and principles of physical science by surveying topics from physics, meteorology and astronomy. The PSCI 1421 laboratory class, is designed with hands-on experiments to reinforce many of the concepts presented in the PSCI 1421 lectures. Through this PSCI 1421 laboratory class, the student is expected to:

1. become familiar with standard science laboratory procedures such as metric measurements, graph plotting, data acquisition, and data analysis;
2. gain knowledge and understanding of the introductory level science concepts of Newton's laws of motion, thermodynamics, meteorology and astronomy through hands-on activities and improve cooperation and teaming skills through designed group laboratory and discussion activities.

### Student Learning Outcomes for Natural Science Core Curriculum Courses

By the end of this course, students will:

1. demonstrate understanding of concepts, principles, and interrelationships of mechanics, energy, laws of thermodynamics, atmosphere and atmospheric processes, and astronomy.
2. develop logical thinking in problem solving that is essential in science.
3. Identify and recognize the differences among competing theories in physical science.
4. demonstrate knowledge of the major issues and problems facing modern science, including ethics, values, and public policies.
5. develop a capacity to use knowledge of how technology and science affect their lives.

### 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](mailto: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, Calculator, Scantron form # 30423 for quizzes

<b>Grade:</b>	Laboratory Reports (11)	40%
	Weekly Quizzes (9)	35%
	Final Exam	25%
	Core Course Assessment Pre-test	5%
	Core Course Assessment Post-test	1.25%

The Laboratory Report is the last 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 10 multiple choice or true/false questions and 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 PSCI1421 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	Physical Science 1421
Jan 17 to Jan 23	Syllabus & Pretest
Jan 24 to Jan 30	Graphing & Units of Measurement
Jan 31 to Feb 6	Linear Motion
Feb 7 to Feb 13	Force
Feb 14 to Feb 20	Energy
Feb 21 to Feb 27	Temperature and Heat Transfer
Feb 28 to March 5	Seasons
March 6 to March 19	Weather
March 12 to March 18	No Labs (Spring Break)
March 20 to March 26	Hurricanes
March 27 to Apr 2	Moon Phases and Topography
Apr 3 to Apr 8	No Labs (Easter)
Apr 9 to Apr 15	Life Cycle of Stars
Apr 16 to Apr 22	Celestial Globes
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.**