**General Physics I Laboratory - Course Syllabus**

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| UTRGV Course title and number  **PHYS-1401-XX** |  |  | Instructor Name:  **Pawan kumar Thapaliya** |
| Term: **Spring 2019** |  |  | Telephone # and UTRGV email address:  **4695315525 pawan.thapaliya01@utrgv.edu** |
| Meeting times and location:  **Set B(BRO) 9:00AM -11:40 AM** |  |  | Office location & hours:  **RusteBurg 208(BRO)** |

**Textbook and/or Resource Material**

* Laboratory Handouts (will be available via BlackBoard/Course Materials)
* Scientific Calculator
* Pencil

**Course Description and Prerequisites**

An algebra-based introduction to the principles of mechanics, fluids, heat, waves, and sound for students fulfilling a natural science requirement and premedical students. The course includes three laboratory hours a week to emphasize course concepts. Prerequisites: MATH 1414, MATH 1314, MATH 2412, or MATH 2413.   
4.000 Credit hours   
3.000 Lecture hours   
3.000 Lab hours

**Learning Objectives/Outcomes for the Course** (as per Lower Division Academic Course Guide Manual by THECB;

<http://www.thecb.state.tx.us/reports/pdf/10663.pdf?CFID=84029362&CFTOKEN=46084495> ).

Upon successful completion of this course, students will:

1. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.

2. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.

3. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration.

4. Apply Newton’s laws to physical problems including gravity.

5. Solve problems using principles of energy.

6. Describe the components of a wave and relate those components to mechanical vibrations, sound, and decibel level.

7. Use principles of impulse and linear momentum to solve problems.

8. Solve problems in rotational kinematics and dynamics, including the determination of the location of the center of mass and center of rotation for rigid bodies in motion.

9. Solve problems involving rotational and linear motion.

10. Demonstrate an understanding of equilibrium, including the different types of equilibrium.

11. Discuss simple harmonic motion and its application to quantitative problems or qualitative questions.

12. Solve problems using the principles of heat and thermodynamics.

13. Solve basic fluid mechanics problems.

**Learning Objectives for Core Curriculum Requirements**

This course is a part of Texas General Education Core Curriculum (<http://www.thecb.state.tx.us/apps/tcc/> ). The following general education core competencies are addressed: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, and Personal Responsibility. Randomly selected assignments from this course might be used for the core outcomes assessment.

**Grading Policies**

*The Laboratory part will contribute 25% towards you* course grade. The grade will be determined as follows:

Lab Reports 50%

Quizzes 25%

Final Exam 25%

Core Course Assessment Pre-Test 1%

Core Course Assessment Port-Test 1%

At the end of the semester only one lab report grade may be dropped. There will be 6 quizzes during the semester. At the end of the semester only one quiz grade may be dropped. The departmental final exam may 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 course/ If you fail the laboratory (grade of less than 60 of 100), you will receive a failing grade for the entire course regardless of your lecture grade.

UTRGV’s grading policy is to use straight letter grades (A, B, C, D, or F).

A: = 90-100 %

B: = 80 – 89.9 %

C: = 70 – 79.9 %

D: = 55 – 69.9%

F: = below 55 %

**Calendar of Activities**

## Schedule

Jan 14 – 20 Syllabus & Pretest

Jan 21 – No Classes (Martin Luther King Jr. holiday)

Jan 22 – Jan 28 Motion in 1D (graph matching)

Jan 29 – Feb 4 – Equation of motion for constant acceleration

Feb 5 – Feb 11 - Motion in 2D

Feb 12 – Feb 18 - Forces

Feb 19 – Feb 25 - Work-energy theorem

Feb 26 – Mar 4- Conservation of Energy

Mar 5 – Mar 8 – Linear Momentum

Mar 11- Mar 16 No Classes (spring break)

Mar 18 – Linear Momentum

Mar 19 – Mar 25 – Centripetal Force

Mar 26 – Apr 1- Oscillations of Cart on spring

Apr 2 – Apr 8 – Vibrating Strings

Apr 9 – Ape 15 Boyle’s Law

Apr 16 – Apr 20 No Lab (Easter)

Apr 22 – Apr 27 - Lab Finals

**Note: Lab Final Exam will be on the week of April 22 to April 27 during lab time in lab room. You must take it in the lab section where you are registered. No make ups or extensions!**

The UTRGV academic calendar can be found at <https://my.utrgv.edu/home> at the bottom of the screen, *prior to login*. Some important dates for fall 2019 include:

January 14 First day of classes

January 17 Last day to add a course or register for Spring 19

January 21 Labor Day – NO classes

April 10 Last day to drop a course; will count toward the 6-drop rule

April 19 - 20 Easter holiday – NO classes

May 2 Study Day – NO classes

May 3 – 9 Final Exams (*for the lecture part of the course*)

May 10 – 11 Commencement Exercises

**Other Course Information**

# Student Questions/Concerns:

May be directed to the Laboratory Supervisor:

**Brownsville:** Ivan Davila Email address: ivan.davila01@utrgv.edu

**Edinburg:** Bryan Hoke Email address: bryan.hoke@utrgv.edu

**UTRGV Policy Statements**

**STUDENTS WITH DISABILITIES:**

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact **Student Accessibility Services (SAS)** as soon as possible to schedule an appointment to initiate services.  Accommodations can be arranged through SAS at any time, but are not retroactive.  Students who suffer a broken bone, severe injury or undergo surgery during the semester are eligible for temporary services.

**Pregnancy, Pregnancy-related, and Parenting Accommodations**

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

**Student Accessibility Services:**

**Brownsville Campus**: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at [ability@utrgv.edu](mailto:ability@utrgv.edu). **Edinburg Campus:** Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at [ability@utrgv.edu](mailto:ability@utrgv.edu).

**MANDATORY COURSE EVALUATION PERIOD:**

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (<http://my.utrgv.edu>); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades.

**ATTENDANCE:** **Attendance is mandatory. Arriving 15 min after the start of lab will be counted as an absence.** Unless otherwise approved by the laboratory instructor and Laboratory Supervisor, **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 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, 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.

**SCHOLASTIC INTEGRITY:**

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

**SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE:**

In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at [www.utrgv.edu/equity](http://www.utrgv.edu/equity), including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct and discrimination.

**COURSE DROPS:**

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

**STUDENT SERVICES:**

Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

* Learning center: BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
* Writing center: BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
* Advising center: BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
* Career center: BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)