

Course Syllabus

Revised 5/25/2016

Course Information

Course Number/Section	PHYS 2125
Course Title	Physics Laboratory I
Term	Summer 2016
Days & Times	Every Thursday (1st meeting on 5/26). See Schedule below.

Instructor Contact Information

Name	Kuei Sun
Office Phone	Extension 2842
Email Address	kuei.sun@utdallas.edu (I respond to UTD emails only)
Office Location	SLC 3.310
Office Hours	By appointment

Course Description

This is a laboratory course to accompany any Physics I or Mechanics course. Experiments investigate basic measurements and statistics including error, mean, standard deviation and error propagation; one dimensional and two dimensional motion; Newton's laws; conservation laws of energy and momentum; rotational motion; and oscillations. (**Corequisite:** [PHYS 1301](#) or [PHYS 2325](#))

Student Learning Objectives/Outcomes

Upon completing this course, students will be able to

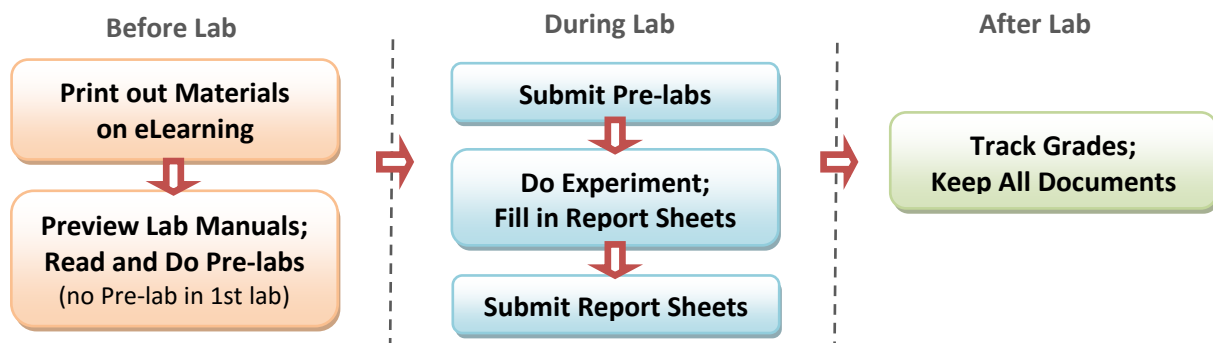
1. Apply the basic concepts and techniques of experimental mechanics to other areas of science.
2. Prepare basic lab reports including data, calculations, figures, and analyses.
3. Classify errors and know how to determine them and how they affect results.
4. Demonstrate understanding of linear, rotational, and oscillatory motion, forces, and energy/momentum conservation.

Required Textbooks and Materials

Students will

1. Print out (i) Lab Manuals, (ii) Pre-labs, and (iii) Report Sheets on eLearning and bring them to lab.
2. Preview Lab Manuals and answer questions in Pre-labs before your section. **Pre-labs are due at the very beginning of lab and are part of grades.**
3. Take data, get TA's initials in Check Boxes, and analyze/discuss results on Report Sheets. **Report Sheets are due by the end of lab and are part of grades.**
4. Regularly check additional materials and helpful information on eLearning.
5. Find the lab safety handout on eLearning. Print out, sign, and **bring to first lab.**

Procedure for students



Schedule

Lab	Date (Thu)	Description	Assignments Due
1	5/26	Measurement & error	Report (no Pre-lab)
2	6/2	Graphing of motion	Pre-lab & Report
3	6/9	Vector analysis of forces	Pre-lab & Report
4	6/16	Newton's 2nd Law	Pre-lab & Report
5	6/23	Projectile motion (I)	Pre-lab & Report
6	6/30	Projectile motion (II)	Pre-lab & Report
7	7/7	Energy/momentum conservation	Pre-lab & Report
8	7/14	Rotation	Pre-lab & Report
9	7/21	Simple harmonic oscillators	Pre-lab & Report
10	7/28	String waves & resonance	Pre-lab & Report

Section Information (TA's name, email, office & office hour)

	Labs 1, 3, 5, 7, & 9	Labs 2, 4, 6, 8, & 10
1U1 (1-3:45) @ FN 2.212	Gebreab Zewdie <gkz130030> Office hour: Wed 11a @ PHY 1.102 #15	Miyoung Choi <mxc140830> Office hour: Wed 3p @ PHY 1.706 #6
1U2 (1-3:45) @ FN 2.214	Liang Zhang <lxz121930> Office hour: Wed 3p @ PHY 1.104	Peng Zheng <pxz150930> Office hour: Tue 4:30p @ PHY 1.102 #14
1U3 (4-7:45) @ FN 2.214	Matthew Fong <mxf140930> Office hour: Wed 2:15p @ PHY 1.706 #5	Qing Wang <qxw151230> Office hour: Wed 2p @ PHY 1.104

Grading Policy

Lab	Score	Pre-lab	Report (data, analyses, & check boxes)				
1	100	No Pre-lab	100%				
2-10	100	30%	70%				
Final score x is the average of the lab scores. There will be no curving.							
Score	$x \geq 90$	$90 > x \geq 85$	$85 > x \geq 80$	$80 > x \geq 76$	$76 > x \geq 72$	$72 > x \geq 68$	$68 > x \geq 64$
Grade	A+ or A (*)	A-	B+	B	B-	C+	C
Score	$64 > x \geq 60$	$60 > x \geq 56$	$56 > x \geq 52$	$52 > x \geq 50$	$50 > x$		
Grade	C-	D+	D	D-	F		
(*)Top 25% of students with $x \geq 90$ get an A+, and the others get an A.							

Course Policies

1. You are required to attend the lab session in which you have registered. If you attend a different section, you will get an **F** in your registered section. No exceptions.
2. You are required to do all labs. There are no dropped grades.
3. Think of Pre-labs as homework exercises before your lab section. You may discuss the reading part with others, but you have to do calculations and answer questions individually and independently. Be sure that your name and section number are written on the first page of Pre-labs. **Pre-labs are due at the very beginning of lab and are part of your grades. Any late Pre-lab will NOT be accepted.**
4. You are expected to work as a group of three (two if necessary) during the lab to take data. Active participation in all labs is required. Each student is required to take at least one independent set of data in each experiment.
5. There are several check points during the lab (as instructed in Lab Manuals). You will ask the TA to check your setup, operation, data, etc. and have TA's initials on Check Boxes on Report Sheets. Please be sure that all the boxes are checked before you submit Report Sheets. **Check**

Boxes on Report Sheets are part of your grades.

6. You will follow the instructions in Lab Manuals to record data in Report Sheets. A team should have the same data. There are analyses and discussions that you have to do individually and independently in Report Sheets. You will submit Report Sheets to your TA as your team finish the lab. Please be sure that your name and section number are on the first page of Report Sheets. **Everything on Report Sheets is part of your grades. Any late Report Sheets will NOT be accepted.**
7. TAs will grade Pre-labs and Report Sheets and return them at the next lab. From the time you receive a lab grade, you have one week to query the TA about the grade. After that, this lab grade is final. Please keep all documents of this semester. **It is your responsibility to make sure the grades are accurate and recorded.**
8. You need to leave the equipment in good working order for the next section. All apparatus must be arranged as it was before your section. TAs will look at your work-area before accepting your Report Sheets.
9. **Make-up labs.** If for any reason you cannot make it to your lab on **Thursday**, you have to do 2 things in advance to get permission to make up the lab on the **coming Tuesday 1pm-4pm**:
1) Contact your regular lab TA about the problem and **get the TA's reply with permission.**
2) Contact the TA of make-up lab as shown below and **get the TA's reply with permission.**

Lab (date)	1 (5/31)	2 (6/7)	3 (6/14)	4 (6/21)	5 (6/28)	6 (7/5)
TA	Fong	Wang	Zewdie	Choi	Zhang	Zheng
Lab (date)	7 (7/12)	8 (7/19)	9 (7/26)	10(8/2)		
TA	Fong	Wang	Zewdie	Choi		

Please be aware that

- The lab will be closed if no student contacts the TAs in advance.
 - There is no grade penalty for your first two make-up labs. Starting from the third make-up lab, your grade will be **(Prelab + Report) × 80%**.
10. In the event of inclement weather etc., check the UTD Web page <http://www.utdallas.edu/> for notice of any unexpected closure of the university (in which case, lab will not meet). The university will also announce its reopening after this kind of closure. After it does, look for an announcement on eLearning that will tell you about the schedule for this lab.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

University Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

These descriptions and timelines are subject to change at the discretion of the Instructor.