

Fall 2015

PHYS 1062

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University of New Orleans

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PHYS 1063-001 Physics for Engineers and Scientists I Laboratory

Mon 1:00 PM to 2:50 PM

Room SC 1081

Instructor Information

Instructor: Elijah Adedeji Email: eadedeji@uno.edu Office: SC 1055 Office hours: By appointment Tutoring Center Hrs: Fridays 3:30pm-6:30pm	Lab Coordinator: Kevin Stokes Email: klstokes@uno.edu Office: SC 1019 Telephone: (504) 280-6341
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Required Textbook and Supplies

- *Lab Manual for First Semester Calculus-Based Physics, 1st Ed.* by P. Robbert, G. Wassermann, and E. Rodriguez, ISBN 9781312106277. The lab manuals are available from UNO's bookstore or on line from Lulu http://www.lulu.com/spotlight/UNO_Physics_Lab
- A scientific or graphing calculator
- **I will provide .pdf files for the first two labs that will be accessible in the course documents folder on Moodle. Please print the first two labs out for the first day of class if you have not received your manual by this time.**

Prerequisites

Credit for or concurrent enrollment in PHYS 1061

Student Learning Outcomes

- Recognize how observation and experiment connect to the theory learned in lecture.
- Perform basic laboratory data analysis techniques, including graphical representation of data and an understanding of statistical and systematic errors and error propagation.
- Demonstrate basic experimental skills; be able to set up and conduct an experiment including computer-based data collection.

Attendance and Tardiness: Attendance is required. Laboratory is all about **participation**, so if you are not present to engage in the laboratory experience, you do not get credit. I will take attendance and quiz at the beginning of each class and take off points for any form of tardiness.

Have your instructor review and initial your data sheet before leaving lab. This document is to be turned in with your formal lab report. **There are no make-up labs.** The lowest lab report grade and quiz grade are dropped; if you are absent for one class and earn a zero, this will be the grade that is dropped. You are expected to report to class on time. If you are tardy, you will miss the quiz that is given at the beginning of class. You may also lose credit on your lab report based on not being present for the entire laboratory activity.

Grading System: Below is the breakdown of course grade.

Weekly Quizzes	10%
Lab Reports/Homework *with participation	80%
Final	10%
	<hr/>
	100%

90 – 100	A work of the highest degree of excellence
80 – 89	B work of a high degree of excellence
70 – 79	C satisfactory work
60 – 69	D passing but marginal work
59 – Below	F work failed

THERE IS NO such thing as LATE LAB REPORTS. However, under **VERY rare and unforeseen circumstances, this maybe be considered but not without a penalty.** There is no extra credit work. *The final will be based on the all the quizzes including the study only sections*

Each Lab report/Homework is graded 100% and could take any of the below grading scale depending on the lab.

	Case 1 (%)	Case 2 (%)	Case 3 (%)	Case 4 (%)
Participation	30	20	40	30
Theory/Abstract	5	5	5	5
Results/Analysis	20	30	25	30
Conclusion	5	5	5	5
Homework	40	40	20	30
Total	100	100	100	100

Moodle:

This class utilizes a web-based information system in order for you to access grades, course documents, and announcements. You can get to Moodle through the ‘quick links’ section at <http://www.uno.edu/currentstudents.aspx>. Also, please be sure to check your UNO student email often, as this will be my main form of communication.

Quizzes:

There will be a 3-7 minutes quiz given at the beginning of each class period based on the labs we will be covering that day. Be sure to read the corresponding lab in your manual before class in preparation for the quiz. Familiarize yourselves with the theory (for the quiz only) and procedure sections (for easy flow during the lab itself)

Participation/Lab Reports and Homework

You will work together in small groups (2 – 4 people) to complete each lab. The lab will consist of performing an experiment and gathering data to test a hypothesis or explore a physics concept. The experimental procedure is in the lab manual and all needed equipment will be provided. You are encouraged to discuss the activity with your group and to ask your instructor questions during class. When you have completed collecting data, have the instructor review your data and initial your data sheet. The written lab report and Homework are due at the beginning of the next lab and should include the initialed data sheet. Neatly tear off your lab report and homework pages from your lab manual and staple them together. Abstract/Theory should contain equations governing the lab. All members of the team are expected to share in the activity and discussion of the lab. Points will be deducted from the lab report grades of a team if all members are not participating. You are expected to leave your lab station neat and orderly. Failure to leave your lab station neat and orderly will result in a deduction of points from your grade. You are expected to take proper care of the equipment that is issued to you. Any reckless damage to equipment will result in a grade reduction.

Academic Integrity

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at <http://www.studentaffairs.uno.edu>.

Students with Disabilities

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to <http://www.ods.uno.edu>.

FALL 2015 PHYS1063-Weekly Lab Schedule

Section 001 on Mondays, 1:00 PM to 2:50 PM
 Section 006 on Mondays, 3:00 PM to 4:50 PM
 Section 601 on Wednesday 7:30 PM to 9:20 PM

Important dates: Wednesday, August 19, First day of class
 Monday, September 7, Labor Day Holiday
 Thurs.-Fri, October 15-16, Fall Break
 Thurs.-Fri, November 26-27, Thanksgiving

WEEK	DATE	DAY	Section	PHYS 1063 SC 1081
2	Aug 24	Mon	001 & 006	1. Vector Quantities
	Aug 26	Wed	601	
3	Aug 31	Mon	001 & 006	2. Kinematics Relationships
	Sep 2	Wed	601	
4	Sep 7	Mon	001 & 006	NO LABS
	Sep 9	Wed	601	4. Newton's 1 st and 2 nd Laws
5	Sep 14	Mon	001 & 006	4. Newton's 1 st and 2 nd Laws
	Sep 16	Wed	601	5. Newton's 3 rd Law
6	Sep 21	Mon	001 & 006	5. Newton's 3 rd Law
	Sep 23	Wed	601	6. Static and Kinetic Friction
7	Sep 28	Mon	001 & 006	6. Static and Kinetic Friction
	Sep 30	Wed	601	7. Gravity and Air Resistance
8	Oct 5	Mon	001 & 006	7. Gravity and Air Resistance
	Oct 7	Wed	601	9. Work and Energy
9	Oct 12	Mon	001 & 006	9. Work and Energy
	Oct 14	Wed	601	NO LABS
10	Oct 19	Mon	001 & 006	10. 1-Dimensional Collisions
	Oct 21	Wed	601	
11	Oct 26	Mon	001 & 006	11. Centripetal Force 12. Torque Lever
	Oct 28	Wed	601	
12	Nov 2	Mon	001 & 006	13. Simple Harmonic Mot
	Nov 4	Wed	601	
13	Nov 9	Mon	001 & 006	15. Standing Waves
	Nov 11	Wed	601	
14	Nov 16	Mon	001 & 006	16. Sound Waves
	Nov 18	Wed	601	
15	Nov 23	Mon	001 & 006	NO LABS
	Nov 25	Wed	601	
16	Nov 30	Mon	001 & 006	FINAL EXAM
	Dec 2	Wed	601	

PLEASE TAKE NOTE OF YOUR OWN PARTICULAR SECTION

Tips for Success

To have a grade A in this lab depend:

1. You must be very proactive in each lab section.
2. You must be able to understand and implement simple instructions.
3. You must be able to turn in your lab reports/ Homework in timely manner.

BEFORE COMING TO LAB:

- a. Always come prepared for your lab as there will be a quiz on the same lab.

DURING THE LAB:

- b. Come to class in time for the quiz which is at the very beginning of the class.
- c. Sign in the attendance sheet to show you were present in the class.
- d. Complete lab work carefully so that you avoid high percent errors. Ask your instructor anything you don't understand. Show the data you obtained to the lab instructor before you leave so that the instructor can verify your lab work is good.
- e. Clean up your workspace before leaving.

AFTER THE LAB:

- f. **Make sure your lab** report is well written and agrees with the lab report format. If you have any questions regarding the lab report, ask your instructor.
- g. You may rip out sections containing tables and graphs from your lab manual or construct/plot your own tables/graphs using Excel spreadsheet.
- h. The perforated part of paper from the lab manual should be cut out properly so that the lab report is neat and clean.
- i. Submit the lab report at the beginning of the next class.