

PHYC 108L

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Hello - I am here to help you do your labs and learn some physics that will help you in your lecture class and future courses. Always feel free to ask questions or make suggestions. Also, feel free to talk to the Lab Director in room RH 113, phone 277-2751. Welcome to Physics 108L!

An electronic version of this document is available online at <http://unm.edu/~jagross/courses/2013/spring/phyc108l>.

Description

Physics 108L is the laboratory associated with the 108 Musical Acoustic lecture. In this lab you will discover and explore the physical basis for sound. The experiments give you an opportunity to learn by using your hands and by discussing phenomena with your lab partners. You will also prepare a semester project that will give you the opportunity to apply the concepts and techniques you have learned to an acoustical problem or phenomenon that interests you. (*Pre- or co-requisite: Physics 108*)

Objectives

This course gives students an opportunity to observe the physical characteristics of sound and music. Students learn a variety of various experimental techniques. Lab students will:

- Read and interpret procedural instructions
- Gather and analyze data using computers interfaced to various probes
- Interpret graphical data
- Observe a variety of acoustical phenomena in a hands on environment
- Relate musical terminology to physical phenomena and terminology
- Apply lab techniques to a novel situation in an end of semester project

Attendance

Lab attendance is very much mandatory.

Scheduled absences: If you cannot make it to your section, it is highly desirable that you complete the lab during my prep time. Contact me AS SOON as you know you must miss a section to schedule a time to make up the lab.

Unscheduled absences: Unscheduled absences WITH A VAILD EXCUSE should be made up the following week. You MUST contact me within one week of your absence to schedule a time to make up the lab, or you will not be allowed to make it up.

Unexcused absences: One unexcused absence will cause your final grade to drop one letter grade. Two unexcused absences will cause you to fail the class.

Materials

Lab workbooks are available at the Bookstore. Every student is required to purchase one before the second week of lab. No copies will be provided.

Preparation

Glance at the lab before coming to class. The order of the labs is approximately the order in which they appear in the laboratory workbook, but check the posted schedule at <http://panda.unm.edu/Regener/Lab/108L/108Lschedule.html>.

Students with Disabilities



Qualified students with disabilities needing appropriate academic adjustments should contact me as soon as possible to ensure their needs are met. Handouts are available in alternative accessible formats upon request.

Grading

Each week, you will receive a score with three components: one for attendance, one for attitude and participation, and one for the physics and other details in the lab report. Score for everything well done: $2(\text{attendance}) + 2(\text{participation}) + 4(\text{lab report}) = 8$. A score of 8 corresponds to a letter grade of A. Your semester grade will be based on the weekly scores and on quizzes which may be given at announced times in the semester.

Below are guidelines for the weekly scores:

Attendance

<i>Grade</i>	<i>Situation</i>
0	Not present in your section. Attendance in another section not verified by TA.
2	Attendance <i>verified by TA</i> .

Attitude/Participation

<i>Grade</i>	<i>Situation</i>	<i>Example Behavior</i>
0	No participation	Reading newspaper, doing homework, antagonizing lab partners, etc.
1	Passive participation	Merely recording data, not helping with set up, not participating in discussions, copying partners, etc.
2	Active participation	Helping with set up, participating in data taking, asking questions, participating in discussions, etc.

Lab Report

<i>Grade</i>	<i>Quality</i>	<i>Example</i>
0	No report	Blank paper
1	Unacceptable	Student turned in report but it was unacceptably poor. Significant errors, unanswered questions, missing data, etc.
2	Acceptable	Report is OK, but there are small errors or missing entries (minimal).
3	Good	Report has only minor error(s).
4	Standard	The report is everything I would expect. All entries are complete, all questions meaningfully answered, data record including graphs is clear and correct, all calculations and units are correct. The report is organized and legible.

Semester Project

During the last three weeks of the lab, you will complete a semester project. You must get approval for your project plan in advance. When your project is approved, you will carry out your plan. In the last week of lab, you will turn in a project paper and give an oral presentation to the rest of the class. Your Semester Project will count the equivalent of three weeks of laboratory work.