General Lab Procedure for Oscillations and Waves PH1140

Prerequisites

In the Oscillations and Waves labs you will team with one or more students and follow written lab procedures to carry out your experiments. These procedures have been written with the assumption that you have taken the prerequisite courses PH1110/1111 and PH1120/1121, and are familiar with the Logger Pro software and the Vernier instruments. If you do not have experience with Logger Pro and Vernier, team with someone who does!

Preparation *!*

Read the lab procedure the day before the lab to determine what equations, if any, you will need during lab to perform the calculations on the lab worksheet. Equations required for lab are discussed in lecture.

General Lab Procedure

This procedure applies to all of the 1140 labs.

Follow the written lab procedure to setup and perform your experiment. Answer the worksheet questions marked **(W)** on the provided worksheet and submit the worksheet to myWPI at the end of the lab. The worksheet registers your measurements and records your attendance. Prepare a lab report, answer the report questions marked **(R)** and submit the report to myWPI within 24 hours of the lab.

> *Make sure you read the report questions during lab, and make notes and sketches that will help you complete your report. You may also save Logger Pro plots and data to files and email the files to yourself.*

For both the worksheet and lab report, write neatly and show your calculations. On the worksheet your answers may be brief, but should be clear. Devote more time to the report, answer at length, give details and consider cases, and use formulas and graphs as appropriate. Two or three pages should be sufficient. The purpose of the report is for you to demonstrate your mastery of the concepts put forth in lab. As such, your report grade is based largely on thoroughness, clarity and organization, all of which improve with effort, so make an effort!

If you complete the lab procedure early, stick around, show some curiosity, experiment some more, and report on your findings. Try to improve a result, or answer a nagging question. Your extra effort in lab will be rewarded twice; **a)** you will understand the physics better, and **b)** you will receive extra credit.