Oral Report Guidelines

Introduction

Watch the online video [1] about giving an Oral report.

All advanced lab students must do an oral report. The dates, times, and locations will be posted the week before oral reports are due, and you must sign up in advance. They are generally given during the week in which the report is due. The report is presented to a professor. Check the lab bulletin board to see which professor and what times are available. Oral presentations will only be given at the posted times. Keep a record of whom you will give the report to, as well as where (typically the professor's office) and when. If you don't show up at your sign-up time, you will receive 0 points for the oral report.

- Once you sign up for an oral time slot you cannot change it without professor approval.

The time allotted for a report is 30 to 45 minutes. You should plan to talk for 20 to 30 minutes. We will stop you after this amount of time whether you are finished or not, so plan your time carefully and focus on the important concepts. Expect your professor to ask questions during the talk, but also after the report.

An oral report is a form of show-and-tell. The purpose is to give you experience in presenting the results of an experiment in a manner understandable to one of your classmates, someone who has taken the same courses, studied the same topics, but who has not yet done the experiment.

The report should show that you did something, that you understand what you did, and that you are familiar enough with the experiment to answer questions that your classmates might ask. You are expected to stand at the whiteboard and to draw or present the necessary diagrams and write or display the useful equations as you speak. You can show hard copies of your plots and explain the contents. You need to present your results along with their errors. The atmosphere is informal and you may use your notes, but do not read your report. Use your notes as little as possible. It helps to practice your talk ahead of time, out loud at the whiteboard, with an audience if possible. Do not assume that the listener has read over the laboratory information sheets. You can't possibly tell everything you know, so pick and choose carefully what to include and what to leave out. Start at a low level, and build up to the essentials of the subject. You are telling a story. Make it coherent and interesting. We want to see how you think about physics. It will not be the same as the way we would put things — don’t copy anyone else, either student or faculty. It's your talk. Tell it like it is, as you see it. Below is a suggested order in which to tell the story, but it is certainly not the only way. How does it make the most sense to you? Tell us how!

It pays to practice, and if you still feel uncomfortable after practicing, ask a GSI to help you by listening to your talk and offering suggestions. You may even go so far as to ask the other professor (the one who’s not going to listen to your report) to coach you. Rather than separating the sheep from the goats, we are here to help you learn. We want everyone’s report to be outstanding.

Your report should include:

1. An overview of what the experiment is all about, and its significance: why should anyone want to do it? How does it fit into the big picture of physics?
2. Give a description of the basic physics necessary to understand the experiment. Don’t derive any of the mathematical details, but be prepared to say where each relevant equation comes from, if it will help the listener understand the physics (how you do the derivation, but don’t actually do it). It is important to write down the equations that are used to interpret the experimental results, and to state the assumptions made in obtaining the equations, and to explain in qualitative terms what these equations mean. The audience, like you, prefers to visualize what is happening in terms of tangible and familiar models.
3. Give a description of the equipment and the experimental procedure. A block diagram is essential, and sometimes a more detailed schematic diagram. These should be your own, not just copied from a book or another write-up. Be sure that you understand in general terms what each piece of equipment does, and that you have some idea of how it
works – what's inside the black boxes?

4. Experimental results. Present the results in the form of a table or a graph. Do not present the raw data, but have them available for discussion if the professor so desires. Compare the experiment with theory by presenting the theoretically calculated values along with the experimental values, if appropriate. Some discussion of errors is appropriate, but will be different for each experiment.

5. Be prepared to answer questions. [For example: How accurately can you set the frequency: Does the amplitude of the modulation affect the accuracy? What if the figure 8 is lopsided? How about the linear display of the scope? Equal amplitudes or equal spacing?]

A written summary is for your own benefit; it need not be handed in, but the cover sheet should be turned in, so we have a record. Turn in your signed Pre–lab/Mid–lab Discussion with your partner's name on the sheet.

**Plagiarism**

Both the University and the 111 Lab staff take the subject of plagiarism very seriously. Please make sure you understand completely the following and ask questions if ever in doubt:

"All data that you present in your reports must be your own. All written work that you submit, except for acknowledged quotations, is to be in your own words. Work copied from a book, from another student's report, or from any other source will, under University rules, earn the student a grade of 'F' for the semester, and possible disciplinary action by the Student Conduct Committee."

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