

# Lab 0: Lab Report Procedure

Welcome to physics at CSU Fullerton!

## Introduction

This semester you and a partner will be working together to complete a set of experiments designed to reinforce concepts you will cover in lecture. Our labs combine students from many different lecture instructors so remember some of you may be a bit ahead, or behind others, it's up to your lab instructor to get everyone on the same page.

Your final goal for each experiment will be to collect data, analyze that data, answer a few questions, then quantitatively summarize the experiment you've performed in a concise, technical conclusion.

Each lab will have two main files: the lab procedure and the lab report.

You are expected to read through the procedure before coming to lab each week so you're ready to perform the experiment. You may be quizzed on the introductory material to each lab.

## What to expect in each lab

As you work through each procedure you'll see two types of queries, Checkpoints and Questions.

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### Checkpoint 1:

This is a checkpoint, you don't have to answer these in your report but they are important to your understanding of the material. They won't be in the report.

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### Question 1:

This is a question that will be in the accompanying lab report for you to answer. Switch over to the lab report and type your answer there. This first question of the semester is: what will your instructor be grading, checkpoints or questions? Explain your answer.

Each lab procedure will be a series of steps with collected data. The Procedure will present you with tables/graphs but you will be given room to place them in the Report.

For example you should be sitting next to one single partner in a group of two, maybe a group of three if your class has an odd number of students, or if someone is missing for the week.

- A) Write the names of all lab group members in [Table 1](#), then write one interesting thing about each partner in the second column.

Table 1: Lab group names.

Lab Partners	
Name	Interesting thing

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At the end of each experiment you'll be expected to write a concise, technical conclusion. This means for each of the concepts covered in the lab:

- Briefly summarize what you did to explore that concept.
- Present any final values associated with that concept.
- Present any difference in your data compared to expected values.
- Explain the source of that difference.
- State whether you think your data is consistent with the expected values or not.

For example, one of your future labs will be on position and velocity, an example conclusion from the velocity portion might be:

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### **Conclusion**

In this experiment we explored the concept of velocity by using a motion a sensor to measure the velocity of a cart as it moved toward or away from the sensor. Using kinematics we predicted the velocity of the cart should be 1.52 m/s and during the experiment we measured an average value of 1.43 m/s. This left us with a 5.9% difference to the expected value. We think this result is consistent with he predictions of kinematics, and the small difference was possibly caused by dust or grime build up on the track which would slow our cart more than predicted in kinematics.

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Note that some labs cover many concepts so its up to you to pick out what is important.

That's all, you should have reached the end of the experiment. Double check that you've answered all the questions in the lab Report, and copy/pasted or filled in any requested data in that report.

### **Grading**

You will be graded on your report, at minimum:

- Your answers to the questions.
- Your completion of the data collection.
- The quality of your data collection.
  - (Differences not explained in the conclusion)
- The presentation of your data collection.
- The quality and coverage of your conclusion.

And anything else your instructor may want to grade in addition to these points.

## **The End**

You've finished your very first lab 0, learning how the labs work.

Normally you'd write a conclusion here, but you'll do that in your first lab.

Be sure you've completed the accompanying report and move on to this week's experiment if there is one for your course.

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