

Lab Reports

PHYS 1210-02, Richard Barrans, Instructor

Written lab reports are a key component of the course. They are due at the beginning of the next lab. In a report, you demonstrate your ability to organize and interpret data, to draw inferences, and to communicate conclusions. Unless otherwise specified, students may submit a single report for their lab group of four or fewer students.

A standard lab report consists of the following sections, with the given weights. Labs whose reports deviate from this format will be accompanied by specific guidelines.

Abstract 5%

Summarizes the investigation, including procedure and conclusions, as briefly as possible.

Purpose 5%

Identifies the questions investigated, hypotheses tested, or skills taught.

Theory 20%

Identifies the physics principles relevant to the situation. Develops the formulas or equations to obtain the desired information from the measurements.

Experimental 15%

Describes the apparatus and procedure in enough detail for a reader to duplicate the experiment.

Observations and Data 15%

Data are to be presented to the instructor at the end of the lab period in which they are recorded. If they need to be included in the report for reference, they should be transcribed.

Analysis and Discussion 30%

Report all processing of data, such as statistics and plots. The actual formulas and procedures you use should already have been addressed in the “Theory” section earlier.

Detail the meaning of your results, particularly pertaining to the “Purpose” above.

Describe possible sources of measurement error, and how errors would affect your results.

Please do not use the term “human error.” If the experimenter may have done something wrong, identify it specifically.

Conclusion 10%

What is the answer to the question you investigated? Is your hypothesis supported or not? Is your study conclusive? Explain, referring to your “Analysis and Discussion” above.