

UNIVERSITY OF ALABAMA
Department of Physics and Astronomy
PH 491/591 Fall 2022

Instructions:

1. This should be turned in individually, but you may work together
2. Nominal due date: 16 Sept 2022

Assignment: Paper outline

The idea is simple this time: I just want you to write a detailed outline for a paper you would write about an experiment you've already done. This could be one of the mini-experiments, an experiment from a prior lab course, or something you're working on as a research project. The only restrictions are that (a) you have to have actually done the experiment yourself so you understand the details, and (b) it should be reasonably complete, such that you can write a conclusion and tell a good story.

What I want you to do is distill the background, methods, data, analysis, and discussion down to a rich outline, sufficiently detailed that it would be straightforward to see what must be written. You can include figures if they help to tell the story, and in this one (and only) case it is fine to fabricate figures for illustrative purposes. They can even just be sketches of what the data should look like, the point is to focus on the organization of the material. If you do not include figures, that is fine, but you should at minimum refer to visualizations that would appear (e.g., "plot of $I(V)$ here," "schematic of experiment," "table of parameters")

There is no specific length or level of detail required, but I do expect there to be multiple levels of bullet points to drill down to finer details where necessary. I also expect at in most cases the intro-methods-results-discussion-conclusion format will work fine, but deviate from or add to this as you find appropriate.

Table 1: *Paper outline Grading Rubric*

Item (points)	Unacceptable (0-5)	Developing (6-7)	Proficient (8-9)	Exemplary (10)
Overall structure points x 2	Not identified or not appropriate	Appropriately identified but not realistic	Appropriately identified, specific, and realistic	Meet proficient criteria, clearly stated, meaningful
Thoroughness of outline points x 3	Not identified or not appropriate	Appropriately identified but not realistic	Appropriately identified, specific, and realistic	Meet proficient criteria, clearly stated, meaningful
Logic/coherence of story points x 3	Not identified or missing key details	Too vague or lacking in but not realistic	Clear and further goals, all key steps present	Multiple strategies and outcomes planned for
Experiment description points x 2	Not present or not appropriate	Present but minimal	Specific ideas and tailored to project	Selected proficiently to meet diverse criteria