# Lab Report Grading Rubric

This applies for labs 1-4.

| | **Proficient**<br>*4 Points* | **Emerging**<br>*2 Points* | **Beginning**<br>*0 Points* |
|---|---|---|---|
| **Materials and Methods** | Includes detailed description of materials and equipment used. Includes detailed and replicable description of the steps involved in conducting the experiment. | Includes some details on materials and equipment as well as some details on conducting the experiment, but it is not clear enough to be replicable. | Missing major components of the description of materials and methods or is missing altogether. |
| **Data** | Relevant graphs and tables included and properly labeled. Error is properly displayed with algebra included where necessary. Pays attention to units as well as significant figures. Fits or other aspects needed for analysis included. | Some relevant graphs included and labeled. Some error is properly displayed and derived. There may be some issues with units of significant figures. | Graphs and tables are unclear and not properly labeled. The error seems very off and inconsistent. Missing steps. |
| **Data Analysis** | Proper regression techniques discussed along with a full description of the parameters in the fit. Discussion on the goodness of the fit. Synthesis with the physical concepts the lab is meant to cover. | Missing some important aspects of data analysis, including discussion on the quality of the fit or a description of the parameters. Synthesis with physics concepts can use improvement. | A lot of analysis is missing, whether it is fit parameters, goodness of the fit, or relationship to physical observables. |
| **Discussion** | Analyzes important results based on the previous sections and thoughtfully responds in some capacity to all the questions presented in the lab. | Some of the discussion questions are not answered or answered incorrectly. Results from the data section are not entirely put in the right context. | Many incorrect or missing answers to discussion questions. There is little in the way of discussing implications of results obtained in the lab. |
| **Organization** | The lab report is clear and coherent. The lab report has max 3 pages, excluding figures, graphs, tables, objectives, etc. Has correct formatting (font size min 12, double spaced) | The lab report lacks some clarity or does not respect the page limits. | The lab report is not well put together and ignore many of the guidelines set forth by the TA. |