

HW #9: Lab Expectations

It is time to go back over your lab notebook, adding what you can to make it more professional. In lab, we require argumentative writing (and guided revision), as a means of promoting habits of mind and work that will serve you well in future work, both on campus and beyond.

As you plan/review your lab notebook, keep in mind the following questions (which I will also ask, as I grade them):

- How much have you written? Is it clear what you've been up to, and what you hoped to learn?
- To what extent have you engaged in modeling (*i.e.*, thinking about) the physical phenomena under study? Have you made clear predictions, at least in extreme (limiting) cases?
- To what extent have you engaged in modeling (*i.e.*, thinking about) the *measurement chain* used to study those phenomena? Have you considered system limits?
- To what extent have you considered the relevant statistics and uncertainties?
- To what extent have you discussed the models you've applied to your (plotted) data, and the *range* over which that model is applied (or is applicable)?
- To what extent have you discussed the *degree* to which your data supports (or fails to support) the model(s) applied?
- To what extent have you discussed "other influences" that could skew your results (by how much, in what direction, *etc.*)?
- To what extent have you discussed possible improvements to or extensions of your experiment? (And have you implemented any?)

To support your development, every time you think that you are ready to turn in a lab notebook, you should then contact your Lab TA, who can meet with you to go over it before you turn it in to me.