

Phys 2501 Grading Checklist

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Abstracts

- scientific question being addressed
- hypothesis statement
- experiment description
- model explanation
- salient results, must be quantitative
- conclusions (addresses hypothesis?) Insist on standing by what the results show

Reports

- Introduction - must contain hypothesis statement
- Experimental method
 - a computer-drawn figure of the setup
- Theoretical model
 - a labeled figure showing the variables (or refer to the above figure)
- Results
 - tables with raw data are highly desired, so the reader can check things
 - graphs whenever there are fits
 - tables showing fit results (parameters, errors, units, chisq, dof)
- Analysis (Error Analysis)
 - all errors must be numbers
- Conclusions - must address hypothesis

General things to watch out for and correct

1. reference to “this” (eg. this experiment) before introducing it
2. use of the language of possibility instead of fact
3. misuse of “calculate” or “calculated”
4. improper use of “theory” or “theoretical value”
5. misunderstanding of a fit as a “prediction” of the model
6. misuse of the term “accurate” or “accuracy”
7. misuse of the term “correlates” or “correlation” to describe agreement between experiment and hypothesis
8. use of “mathematical” where it is implied
9. misuse of nosisms (eg. the “royal we”)
10. overuse of first person “I”
11. inconsistent use of tense and voice

12. use of the term “error” when they mean “blunder”
13. description of least-squares fit as a “regression”
14. any commands to the reader (exceptions: recall, note that, etc.)
15. missing errors and/or units on measured results
16. references to equations, figures, tables, etc. in the abstract
17. displayed equations in the abstract
18. apologies or excuses for what look like bogus results
19. do not permit any blame of apparatus
20. correct formatting of figures
 - centered on page without any surrounding box
 - caption underneath, no title or legend within the body of the figure
 - error bars on measured points, smooth curve without errors for fits
21. correct formatting of tables
 - centered on page, without overflowing margins
 - caption on top, no vertical lines, correct use of horizontal lines
 - sig.figs, scientific notation, errors and units all correct

Grading expectations

- No fractions on the scores, just integers out of 10.
- The hours late should be recorded on huskyct together with each report.
- Do not apply the late penalty in the online grade. Record both the unpenalized score and the number of hours late, and let the instructor apply the formula (with exceptions) offline.
- All grade records should be kept on huskyct, so the students can keep track of them.