

# Grading Rubric for Papers in Physics 480W

## The Matrix

**title of reviewed paper:** Optical Pumping in 85Rb and 87Rb

Table 1: grading rubric: each evaluative category (row) is scored on a 3-2-1 basis. Each category is weighted ( $w$ , shown next to the category descriptor below) either 2, 1, or 1/2. The total number of points possible per row is then  $3 \times w$ , (i.e. 6pts are possible for row 1). There are 9 total rows, and 30 total points possible. The grades recorded will be, however, a score out of 100 arrived at by dividing the student's score by the total possible, etc., etc. Note that physics content accounts for 18/30 of the total, or 60% of the total grade. Grammar & composition, and formatting account for 40%.

	Proficient (3pts.)	Intermediate (2pts.)	Developing (1pt.)	total-whiff (0pts.)	Score
<b>Physics Content, 18 pts. possible</b>					
Correctness (w=3)			⊗		3
error analysis (w=2)		⊗			4
completeness (w=1)	⊗				3
<b>Grammar &amp; Composition, 9 pts. possible</b>					
level of prose composition (w=1)	⊗				3
level of sentence syntax (w=1)	⊗				3
diction (w=1/2)	⊗				1.5
"Math as Prose" (w=1/2)	⊗				1.5
<b>Formatting, 3 pts. possible</b>					
L <sup>A</sup> T <sub>E</sub> X formatting (w=1/2)	⊗				1.5
AIP formatting (w=1/2)			⊗		0.5

### Comments:

The theory section of the essay was complete. I was a little confused on the derivations of some of the equations. The results section did include error and uncertainty values. I would recommend including an analysis of where the error stemmed from. Overall the essay was complete and included results and conclusion asked of in the experiment. I would just recommend expanding the theory section a little more.

Overall the grammar and composition of the essay is well done. The level of prose is indicative of a well thought out essay delivered at an appropriate level. For math as prose you did a good job to include proper punctuation at the ends of equations. Additionally I would recommend referring back to the equations in the theory to tie them to the results section to help the reader recall where they are coming from.

The latex formatting of the essay is well done. For the title it needs to not be capitalized and should be aligned on the left to go along with AIP formatting. Also some of the spacing between the sections towards the end of the paper is a little funky. Also I don't think the names of your group isnt completely correct cause Brennan and Quinn did plasma. For the references the articles should have dates of publication. Score =  $21/30 = 70$  percent