

Group Project/Presentation Description and Grading Rubric

FYSE 130 -- Physics of Sport

Fall 2014

You have been (or will be) assigned groups to investigate assigned questions that you will be presenting to the class near the end of the semester. This document outlines the goals and expectations of this project.

Due Date:

Your work will be presented, as a group, in class on one of the following days (date to be assigned later in the semester):

Monday, November 17th

Wednesday, November 19th

Friday, November 21st

Monday, November 24th

Monday, November 30th

Or during the final exam time-slot, Monday, December 8th

Format / Details:

Each group will be assigned two questions to investigate. You are only expected to present your work associated with one of these questions; the other question has been given to you as a “back up” topic in case your original inquiry proves to be more challenging than originally expected.

Unlike your paper topics from earlier this semester, these topics are designed to offer you the opportunity to actually make some measurements to come up with your answer. Although you are welcome to use Physics principles or ideas in developing your answer to the question, there is no expectation that you will. Any valid means of finding out the answer to the question is acceptable.

You will be graded according to the rubric attached to the end of this informational material. In addition to a group project grade, you will receive a second grade – that influences both your group project grade and your course homework grade – that is given based on your own personal contribution to the group work. Your group-mates will have some input in telling me how much you participated in this project, and that will have an impact on your final grade; if you end up freeloading, I’ll find out.

Your presentation/talk is expected to last approximately 20 minutes per group (if you talk for less than 16 minutes or more than 24 minutes, your group will be penalized), plus an extra 5-10 minutes or so to answer questions posed by your professor and classmates. We will try to hold all questions to the end of your group presentation, so you should plan to fill all 20 minutes with your

presentation. You are welcome (though not required) to use Powerpoint or some other presentation software to help make your presentation.

Each group member is expected to speak for at least 20% of the presentation. You may either read from a prepared script, present using notes, or talk without any extra aids. All presentations will be given in a manner appropriate for a traditional class lecture (though multimedia extensions in the lines of videos or in-classroom demos are acceptable and encouraged). If you have any questions about whether or not a particular presentation element is acceptable, clear it with Dr. Larsen before hand; as always, Dr. Larsen reserves the right to disallow anything he deems inappropriate or unsafe for the class.

Ultimately, the goal of your presentation is to verbally communicate the same sorts of ideas that were discussed in your papers. Although the nature of the questions and the presentation mode changes the grading structure slightly, the end goal remains essentially the same.

As before, your presentation is expected to outline the following clearly and completely:

1. Problem Description
2. Outline of Your Suggested Solution (including your answer)
3. Confidence Estimation
4. Commentary/Extensions of Your Suggested Solution

For more guidance on what sort of ideas are expected in each of these sections, see the more complete description listed on your paper descriptions/grading rubric forms. (If you have misplaced these forms, they are still available on the course website).

At the end of your presentation, the audience should have a clear idea of (1) what you wanted to find out, (2) how you went about finding an answer to this question (in enough detail that they could replicate the process themselves if they wanted to), (3) why you decided to investigate the problem this way, (4) your best answer to the question, (5) some sense of how confident you are in your solution/how much your answer might actually be off (and how you came up with these uncertainties), (6) things you learned from this process, (7) what you might do differently if you were to do this again, and (8) anything else you think is worth sharing with us.

After your presentation has been completed, your classmates and your professor will ask you questions about your work. You will be graded on the completeness, coherence, consistency, and thoughtfulness of your responses. You will be (briefly) allowed to consult each other before each answer if necessary.

Grading Rubric

These presentations will be graded according to the following rubric.

Format (15%)

All group members present at least 20% of the time. The presentation lasts for the appropriate length. Appropriate and professional language is used.

Problem Description (10%)

Nature of problem/question is clearly conveyed to the audience. Enough detail is given to characterize the specific problem addressed.

Outline of Suggested Solution (25%)

Solution method outlined is presented clearly and justified. Argument contains no logical inconsistencies, and subsequent steps naturally follow from previous steps in the process. Audience could understand steps taken by the group to solve the problem and could, in principle, replicate them.

General Believability of Answer (10%)

Final result clearly communicated and passes the “smell-test” for believability. If your answer is clearly wrong – and can be shown to be clearly wrong rather simply – you may not gain any points in this category.

Confidence Estimation (10%)

Group develops a reasonable means to estimate how far off the answer might be from the “true” answer to the question. Confidence interval is justified through a logically consistent line of reasoning.

Class and Instructor Questions (15%)

Group is able to answer questions posed by the class and instructor to an appropriate extent. Group has appropriate justifications for choices made and demonstrates mastery of the ideas associated with their topic/question.

General Impression (15%)

A subjective category based on your instructor’s evaluation of the quality of the technique used, critical thinking skills applied to the problem, and quality of the presentation.