

PERFORMANCE ANALYSIS DEMONSTRATION AND REPORT (DUE DEAD WEEK)

The main purpose of this assignment is to demonstrate that your group has identified and analyzed the key engineering issues for your senior design project, especially in design performance. There are two parts to this assignment, the actual **demonstration** with the course instructor (doesn't have to be very formal) and the **performance analysis report** which you should hand in anytime during dead week. Do keep in mind that both of these parts account for 25% of your final grade.

- (I) **Physical Demonstration:** You should demonstrate your performance test to the instructor, preferably by appointment during dead week. Again, it does not have to be formal; all you need to do is give a brief introduction as to how you go about testing your system's performance, present the demo and discuss the outcome of your experimental tests. You are welcome to have more than one performance analysis. For those groups who are unable to accomplish this task due to specific reasons, you are still required to meet with the instructor for an oral demonstration instead. Bring any materials that might be helpful, e.g., video clips, experimental figures, images, etc. If you cannot bring in your equipment from a off site location, then your project advisor may witness the performance evaluation.

- (II) **Performance Analysis Report:** The report should be about 3 pages long (not including the title page) and can be reused in your group's final report. In the report, you should include:
 - A *title page* with the name of the project and group members

 - *Introduction*
 - Briefly describe the objective and goal of your design project
 - Introduce the appropriate performance criterion or criteria for your system and explain why your group chose to evaluate the design's performance using each criterion
 - Include any mathematical equations used for the performance analysis
 - State hypothesis, as in what you would expect to achieve after conducting these test experiments

 - *Experimental Procedure*
 - Explain the experimental procedure, i.e., what did your group do to test the system based on each performance criterion
 - Include any assumptions made while conducting the experiments

- Also you may include pictures, or experimental diagrams for visualization
- ***Performance Results Analysis***
 - In this section, you need to analyze and explain the results obtained during all the experiments
 - Explain any possible errors, and if applicable, how would you have overcome or avoid it, i.e., are there possible solutions to correct these errors?
 - Examine the effect of this performance analysis on your current design
 - Include experimental data, e.g., figures, charts or calculations
- ***Brief Summary and Conclusions***

Turn in hardcopy of this report as Word document or PDF.