

Grading Rubric for Statistics 101 Project
Design of Experiment and Analysis

Group Members: _____

1) Research Question – 5 pts. Did you adequately explain your research questions? Did you clearly identify the variables you used to address your research question?	
	Total: _____ out of 5 points
2) Design of Experiments	
a. 4 pts Control – Have you described variables that could affect your experiment other than the treatment? Did you control for these variables in your experiment? How did you control for these variables?	
b. 4 pts Replication – Did you correctly identify your experimental units? Did you complete several trials at each treatment level using different experimental units? How many trials do you have at each treatment level?	
c. 6 pts Randomization –How many total trials do you have in your experiment? Did you describe how you assigned an experimental unit to a trial? Did you randomize the order of the trials? Did you describe how you randomized the order of the trials?	
	Total: _____ out of 14 points
3) Analysis of Data	
a. 4 pts Distribution of the response variable. Did you look at the distribution of the response variable independent of the explanatory variable? Did you describe this distribution and note any important features?	

b. 2 pts Scatterplot and correlation. Did you correctly describe the scatterplot of the response and explanatory variables? Did you note any important features, such as outliers or curved patterns?	
c. 2 pts Statement of Regression Equation. Did you correctly state the regression equation in the context of the problem?	
d. 3 pts Slope. Did you state the value of the slope and correctly interpret its value in terms of the problem?	
e. 2 pts R^2 . Did you state the value of R^2 and correctly interpret its value in terms of the problem? Did you indicate what this value means in terms of the overall fit of the regression model?	
f. 3 pts Residual Plot. Did you look at a plot of the residuals from the regression? Did you correctly describe this residual plot and indicate any potential problems?	
	Total: _____ out of 16 points

4) Conclusions – 5 pts . Did you discuss what your analysis indicates about your hypothesis concerning your response and explanatory variables? Did you have the correct conclusion about your hypothesis given your data analysis?	
	Total: _____ out of 5 points

5) Draft Reports – 10 pts . Did you meet the four deadlines with a reasonable product? Research question? Experimental design? Data plus edited version of first two sections? Draft Report?	
	Total: _____ out of 10 points

Total Project Score: _____ out of **50** points