**Final Project: Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Final Project** | **4 = Complete** | **3 = Substantial** | **2 = Developing** | **1 = Minimal** |
| **Introduction** | * Describes the context of the research
* Has a clearly stated question of interest
* Clearly defines the parameter of interest and states correct hypotheses
* Question of interest is of appropriate difficulty
 | * Introduces the context of the research and has a specific question of interest
* Has correct parameter/ hypotheses OR has appropriate difficulty
 | * Introduces the context of the research and has a specific question of interest OR has question of interest and hypotheses
 | * Briefly describes the context of the research
 |
| **Data Collection** | * Method of data collection is clearly described
* Includes appropriate randomization
* Describes efforts to reduce bias, variability, confounding
* Quantity of data collected is appropriate
 | * Method of data collection is clearly described
* Some effort is made to incorporate principles of good data collection
* Quantity of data is appropriate
 | * Method of data collection is described
* Some effort is made to incorporate principles of good data collection
 | * Some evidence of data collection
 |
| **Graphs and Summary Statistics** | * Appropriate graphs are included
* Graphs are neat, clearly labeled, and easy to compare
* Appropriate summary statistics are included
* Evidence for Ha and two explanations are provided
 | * Appropriate graphs and summary statistics are included
* Graphs are neat, clearly labeled, and easy to compare or evidence for Ha is provided and discussed
 | * Graphs and summary statistics are included
 | * Graphs or summary statistics are included
 |
| **Analysis** | * Correct inference procedure is chosen
* Use of inference procedure is justified
* Test statistic, *P-*value and confidence interval are calculated correctly
* *P-*value and confidence interval are interpreted correctly
 | * Correct inference procedure is chosen
* Lacks justification, lacks interpretation, or makes a calculation error
 | * Correct inference procedure is chosen
* Some calculations or interpretations are correct
 | * Inference procedure is attempted
 |
| **Conclusions** | * Uses *P-*value to correctly answer question of interest
* Discusses what inferences are appropriate based on study design
* Shows good evidence of critical reflection (discusses possible errors, limitations, etc.)
 | * Makes a correct conclusion
* Discusses what inferences are appropriate
* Shows some evidence of critical reflection
 | * Makes a partially correct conclusion (such as accepting null).
* Shows some evidence of critical reflection
 | * Makes a conclusion
 |
| **Overall Presentation/ Communication** | * Clear, holistic understanding of the project
* Poster is well organized, easy to read, and visually appealing
* Statistical vocabulary is used correctly
* Oral presentation is organized
 | * Clear, holistic understanding of the project
* Statistical vocabulary is used correctly
* Poster or oral is unorganized or has other problems
 | * Poster is not well done or communication is poor
 | * Communication and organization are very poor
 |

Note: A score of 0 is possible in each category.