## **Final Project: Rubric**

| Final Project                             | 4 = Complete  | 3 = Substantial  | 2 = Developing  | 1 = Minimal   |
|---|---|--|---|---|
| Introduction                              | <ul> <li>Describes the context of the research</li> <li>Has a clearly stated question of interest</li> <li>Clearly defines the parameter of interest and states correct hypotheses</li> <li>Question of interest is of appropriate difficulty</li> </ul>        | 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<br>the context of<br>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<br>of data<br>collection                |
| Graphs and<br>Summary<br>Statistics       | <ul> <li>Appropriate graphs are included</li> <li>Graphs are neat, clearly labeled, and easy to compare</li> <li>Appropriate summary statistics are included</li> <li>Evidence for Ha and two explanations are provided</li> </ul>                              | 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<br>summary<br>statistics are<br>included   | Graphs or<br>summary<br>statistics are<br>included    |
| Analysis                                  | <ul> <li>Correct inference procedure is chosen</li> <li>Use of inference procedure is justified</li> <li>Test statistic, P-value and confidence interval are calculated correctly</li> <li>P-value and confidence interval are interpreted correctly</li> </ul> | 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 <i>P</i> -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<br>conclusion                                 |
| Overall<br>Presentation/<br>Communication | <ul> <li>Clear, holistic understanding of<br/>the project</li> <li>Poster is well organized, easy to<br/>read, and visually appealing</li> <li>Statistical vocabulary is used<br/>correctly</li> <li>Oral presentation is organized</li> </ul>                  | Clear, holistic     understanding of the     project     Statistical vocabulary     is used correctly     Poster or oral is     unorganized or has     other problems                | Poster is not well<br>done or<br>communication<br>is poor   | Communication<br>and<br>organization<br>are very poor |

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

