

**Final Project Rubrics**  
**Stat 021 Fall 2020**  
**Swarthmore College**

**Option 1** (4-5 pages total - excluding references)

1. Informative introduction (worth 20 points)
  - a. Should be between 1-2 pages (**not** including plots or tables).
  - b. Must demonstrate an understanding of the main research question(s).
  - c. Must provide a brief literature review of relevant publications.
2. Thoughtful analysis and reflection on the methodology (worth 30 points)
  - a. Should be between 2-3 pages (including plots and tables).
  - b. Clearly communicate the main ideas and technical statistical methods used in the main paper.
  - c. Relate the statistical methods to the topics we covered in class.
  - d. Discuss the appropriateness of various necessary assumptions.
3. Statistical discussion and critique (worth 20 points)
  - a. Should be about 1 page long (**not** including plots or tables).
  - b. Present relevant statistical questions that may be a natural extension of the work.
  - c. Critique the results of the statistical analysis providing evidence of statistical reasoning.
4. References (worth 30 points)
  - a. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
  - b. Each reference must be cited in a way that anyone can find the source.
  - c. Must be cited alphabetically.

**Option 2** (3 - 4 pages total - excluding references)

1. Introduction and background (worth 20 points)
  - a. Should be 1-2 pages (**not** including plots or tables).
  - b. Clearly state the statistical research question(s).
  - c. Provide a relevant background information and brief literature review.
2. Analysis: methods and results (worth 30 points)
  - a. Should be between 2-3 pages (including plots and tables).
  - b. Provide a clear explanation of the data. Identify the observational units and the variables of interest and include any information you can on how the data was obtained.
  - c. Clearly communicate the technical statistical methods used.
  - d. Thoroughly discuss the appropriateness of various necessary assumptions for the statistical methods you used.
  - e. Clearly communicate the results and conclusions from your statistical analysis.
3. Discussion and critique (worth 20 points)
  - a. Should be at least  $\frac{1}{2}$  page long (including plots and tables).
  - b. Must demonstrate critical thinking.
  - c. Must provide evidence of statistical thought.
4. References (worth 30 points)
  - a. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
  - b. Each reference must be cited in a way that anyone can find the source.
  - c. Must be cited alphabetically.

**Option 3** (4-5 pages total - excluding references)

1. Informative introduction (worth 20 points)
  - a. Should be 1-2 pages (**not** including plots or tables).
  - b. Must provide a brief survey of the presenter's statistical (or data science oriented) work.
  - c. Provide a brief literature review on modern, related research.
2. Thoughtful summary of the presentation (worth 30 points)
  - a. Should be 1-2 pages (**not** including plots or tables).
  - b. Summarize the contents of the talk you attended.
  - c. Must demonstrate an understanding of the statistical concepts relevant to the talk.
  - d. Think creatively about how the topics in the talk could relate to anything we discussed in class this semester.
3. Critical discussion and reflection (worth 20 points)
  - a. Should be 1-2 pages long (**not** including plots or tables).
  - b. Presenting relevant statistical questions that you are curious about or that you see as a natural extension of this work.
  - c. Must demonstrate critical thinking and show evidence of statistical thought.
4. References (worth 30 points)
  - a. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
  - b. Each reference must be cited in a way that anyone can find the source.
  - c. Must be cited alphabetically.