MATH 6330: Workshop in Statistical Consulting
SEMESTER PROJECT REQUIREMENTS

A large part of your semester effort goes toward working with a client, in fact this accounts for 57.5% of your course grade. As such, students are expected to spend around 100 hours on the project with the end result being a final written document for the client as well as a 40 minute oral presentation (to be scheduled on April 28, May 5, or May 12). As appropriate, other deliverables may be agreed upon with a client, e.g., R scripts of analyses and data freezes.

The final grade for your project includes:

- Written paper, geared toward client, 65%
- Oral presentation, client and class accessible, 35%

Papers:

All papers must have the main sections specified below. Within each section I have given requirements as to what should be included. This is not an exhaustive list so please include what is necessary for your particular consultation. The report should be targeted to your client (as opposed to a statistical audience).

1. Introduction that gives the background and context necessary for your project, clearly identifying the goals of your consultation and analysis, and the deliverables. Be clear as to the type of study, e.g., observational, survey, randomized experiment, and the population relevant to your analyses.

2. Analysis and Results
   - This section provides the results of your analysis -- do not include discussion in this section (see below).
   - Be sure to include interpretations and “walk throughs” of the results/findings
   - Your results should be presented clearly with tables and figures. DO NOT USE PROGRAMMING CODE AND OUTPUT to provide your results. Programming code and/or scripts should be placed in an appendix to the paper.

3. Discussion
   - Discuss your results. Keep this cleanly broken out from analysis/results.
   - Have you addressed your client’s goals?
   - Are there any caveats to your analysis?
   - What are the next steps from such an analysis?
   - Recommended resources

4. Model and Methods
   - Clear mathematical specifications for your method

- Assumptions of the method, including experimental design and target population
- What data was used, e.g., quantitative, discrete, distributional assumptions, covariates etc.
- Were any pre-filtering or processing steps applied to the data?
- How was missing data handled in your analysis?
- Provide anything here that would need to be known to reproduce your analysis

5. References

6. Appendix
    - Include necessary code or software instructions to carry out your analysis. If providing a script, use commenting throughout to explain code.
    - Feel free to include any other resources you have referred to or found helpful
    - If appropriate, include other deliverables

Formatting of paper:

Please place an electronic copy of your paper in your student Dropbox folder the day of your presentation. For group projects, coordinate with me in terms of logistics for a paper or two papers.

Your paper should be double-spaced typed text with 1 inch margins and 12 point font. In terms of length, it should be long enough to contain all of the requirements listed above and do so in a clear manner. I would be surprised if the length turned out to be fewer than 15 pages and would hope it would not be more than 25 total including figures, etc.

Grading of project:

I will use the following criteria and breakdown of points for grading your project.

PAPER:	
40%	Content –The required sections and information are provided. Arguments, statistical and otherwise, are correct. The analysis, results, and discussion are ***understandable at the client level***. The methods used are appropriate. Support is given for conclusions reached.
5%	Organization –The ideas and information are effectively arranged to support the purpose of the project. The material is easy to follow and revisit information as necessary.
5%	Visuals –Visuals, e.g., figures and tables, clearly support the purpose of the project and their placement are such that they help the reader understand the content.
5%	Style/Clarity –The writing is efficient, clear and easy to read, e.g., overview, topic sentences, transitional sentences and section headers etc. are used to assist the reader throughout the paper. The tone of the paper is appropriate.
5%	Mechanics –Document is free of spelling, punctuation and grammatical errors.
PRESENTATION:	
5%	Content –The content provided is at an appropriate level to introduce the consulting project to a mixed audience of clients and statisticians. The analysis and results used are correct as well as clearly and accurately stated.
5%	Organization –The ideas and information are effectively arranged. The material is easy to follow and revisit information as necessary.
5%	Visuals –Visuals, e.g., figures and tables, clearly support the purpose of the project and their placement in the presentation are such that they help the reader understand the content.
5%	Style/Clarity –The writing is efficient, clear and easy to read, e.g., overview, topic sentences, transitional sentences and section headers etc. are used to assist the reader in their viewing of the presentation.
5%	Mechanics –The presentation is free of spelling, punctuation and grammatical errors.