

STAT 8250 — Applied Multivariate Analysis
Project – Due Monday, December 11

As mentioned in the course syllabus, 20% of your grade in this course will be based on a project. This project will be an 8–12 page paper presenting an application of multivariate statistical methods. The paper should include

1. description of the research question/issues;
2. description of data — what and how collected;
3. presentation of statistical analysis of data including
 - a. what analyses were done and why,
 - b. results (no SAS output, but a small number of tables and/or graphs may be appropriate),
 - c. the appropriateness of the assumptions underlying your methods should be addressed,
 - d. conclusions;
4. limitations of analysis/data; further questions.

Due Date: Monday, December 11, but get going early so that you have time to study for the exam on the 15th.

Proposal: By Monday, November 20, submit a proposal for your project. Your proposal should *briefly* describe the data source, central research question(s), and expected statistical methodology for your project. Your proposal can be quite brief and need not exceed 1 page.

Topic: Ideally of your own choosing from your field of study. I can help you decide on a topic/data set if you need suggestions. If so, you should arrange to meet with me soon (this week or Monday at the latest). Our next topic in this course will be cluster analysis. We should be able to get through enough material on cluster analysis quickly enough so that the multivariate methods that we will have covered in detail in class from which you can choose for your project will be cluster analysis, factor analysis, PCA, and MANOVA-type analyses. Alternatively, some of you may want to tackle a project involving a multivariate method that we won't have covered in detail in class, such as discriminant/classification analysis, multivariate regression, multidimensional scaling, or canonical correlation analysis. I don't want to dissuade you from doing so. In fact, I will make this an attractive option by assuring you that my grading standard for your project will be more generous if you choose to use a method that we have not covered in class. In addition, I can point you toward references and examples of analyses with these other methods and I will make myself available outside of class to help you individually with whatever methodology that you decide to use.