Due dates

Proposal: Due noon on Friday, November 20, 2009. You should drop off a paragraph-long proposal of your intended project in the Statistics 101 box on the 7th floor of SC.

Completed project: To be presented on Wednesday morning, December 9, 2009.

General description

The final project will take one of the forms discussed below. You should carry out the project in a group of two or three students. You can form your own groups, but if you do not know anyone in the class or are uncomfortable asking someone else, let us know and we can try to pair you with someone else.

One possible project is to conduct a statistical analysis of data on any topic of interest to you that demonstrates your understanding of the material you learned in Statistics 101. Possibilities for this include:

- A substantive statistical analysis of a study (e.g., survey or experiment) you carry out: For this, you need to think clearly about how you will design the survey and maximize response rates without unnecessarily asking for time from your fellow Harvard students during the busy period at the end of the semester. Students opting for an original study will be responsible for a good study design in addition to a good data analysis.


The dataset does not have to have a behavioral or social science orientation, and you can analyze data relating to any topic of particular interest to you, such as some sport, issues relating to the environment, business, etc.

Here are two other possibilities:

- Describe and critique an article in a research journal in a field of interest to you (such as Psychological Bulletin, Psychological Review, American Sociological Review, or American Political Science Review). You should include a summary of the statistical analysis performed for the research and how it relates to the conclusions of the article.
Learn about and summarize a statistical method that we will not have discussed in Statistics 101. For example, in class we will have learned about regression models for a univariate response variable. One type of project would be a tutorial of a particular method for multivariate response variables, such as a topic introduced briefly in Chapter 16 of the text (e.g., “longitudinal data analysis” or “factor analysis”). You can use books in the library and/or searches on the Internet to learn about the topic. For many topics, I would be able to make specific suggestions of sources to look at.

Students who do the project will make a presentation to the class, using a poster, during the Reading Period, on Wednesday morning, December 9. The class will be divided into two groups, which you will be able to sign up for. The sessions will tentatively run from 9 to 11:00 am and from 11:00 am to 1 pm. Each group will take a turn presenting their poster, for about 10 minutes, and then will respond to questions from other students and the instructors for a few minutes. All students should attend one of these sessions, regardless of whether they present a project.

In your proposal paragraph that is due on November 20, please include the names of the students involved in the project, the aims and scope of your project, and, if you plan to analyze data, how you will obtain your data. Specifically, if you are performing primary data collection through a study you design, describe briefly how you will obtain the data. Or if you plan to analyze existing data, assure us with some evidence that you have the data, or at least know where to obtain the data. Shortly after receiving your project proposal, I will provide quick feedback. We would like to diagnose projects that are either too ambitious (in which case we will make suggestions for how to scale back), or those that are not ambitious enough (so that we can provide suggestions for improving the project). You are welcome to discuss project ideas with a TF, and we welcome project proposals earlier than November 20 if you want to get started early. Agresti would like to meet briefly (about 5-10 minutes) in his office with each group to review their proposal and make whatever suggestions he can, on November 23 or 24 (and on December 1 for those who can not meet before Thanksgiving). Please e-mail aa@stat.ufl.edu to set up an appointment time.

**Poster format**

Many web sites exist that explain effective poster creation. Below are a couple of sites that display example posters (though not in statistics):

http://www.ncsu.edu/project/posters/NewSite/ExamplePosters.html

http://www.spinellis.gr/rese/poster/indexw.htm

You can find other examples through web searches on the key words “poster presentation examples”, and we will show examples of good posters in class in December.

A poster display should generally include components such as the following:

- **A statement of the questions or purpose.** What problems or questions did you set out to
investigate?

- **The background and preparation for conducting the project.** How did you prepare for the project? What sources or background readings did you consult? What information did you use in developing your ideas from the conceptual stage to the finished project?

- **Statistical methodology.** What did you do, and how did you do it? How did you gather information? If you did a survey, how did you try to take a random sample? What statistical methods did you use?

- **Results and conclusions, the summary and presentation of your data analyses.** What did you find out? This might include tables, graphs, and verbal summaries with inferences, including interpretations. What did you learn about the problem or question you set out to investigate?

- **Discussion and critique.** What did you learn about the process of carrying out your project? What went wrong, and how could you improve it next time? For instance, did any sources of bias creep into your survey or experiment?

Not all points will be relevant to all posters. The content of your poster should be equivalent to roughly that of a 10-page paper. (If you prepare a poster, you are not asked to hand in a paper.) You should use large print on your poster and aim for an attractive and well-organized display. Try to think of a catchy title that captures the spirit of your project.

**Project Grade**

At the end of the presentations, all students will leave their poster presentations with the TFs. Agresti, Kelly, and Hennessy will grade this jointly. This grade will count for 20% of the course grade, and all group members receive the same project grade. For those preparing a poster, the following three areas will contribute to the grade, with primary weight given to the statistical content:

**Presentation & Poster:** Is the poster attractively presented and well organized? Do the graphics communicate well? How well does it address the five points listed above (if relevant to the project)?

**Statistical content:** Does the project incorporate concepts and methods from this course? Are they used appropriately and correctly? For studies involving data collection, was the project well designed?

**Subject matter content:** Did you learn something about the subject of the project? Is the project interesting, fun, provocative, compelling, educational, fascinating, etc...?