

## Course Project Final Report

**Overview** The main goal for this course project is for you to demonstrate your understanding of the course material by carrying out an independent study that includes choosing a question, gathering data, performing statistical analysis (descriptive and inferential), reaching conclusions, and writing a technical report.

**Specific requirements** Complete your study and submit a written report by 2 pm on Wednesday, May 14.

- Format your report in the following way:
  - Submit a printed copy generated using a word processor such as Word.
  - Insert graphs into your document electronically. You can put each graph near the relevant place in the text or put all of the graphs at the end.
  - Number and caption each figure and table.
  - Use 1.5 or double spacing.
- Your report should include the following elements:
  - A one-paragraph abstract that summarizes your study.
  - An introduction that describes your study in general language including the general question(s) you are addressing.
  - A precise description of the population(s) and parameter(s) of interest in your study.
  - Details on the design of your study including analysis of any potential sources of bias in your design.
  - Descriptive statistics on your data.
  - Inferential statistics based on your data including analysis of the degree to which your data satisfies the assumptions of the procedures you use. You should do at least one piece of inference based on your data.
  - Conclusions based on your statistical analysis and judgment. This might include ideas or recommendations on further study of the question(s) your study addressed.
  - An appendix with a copy of the survey form you used (if relevant).
- Submit a copy of your data, preferably in digital form such as a Minitab or Excel file. You will send this to me as an e-mail attachment. Name your file “Course-Project\_XX.yyy” where XX are your initials and yyy is the appropriate extension (such as “mpj” for a Minitab Project file or “mtw” for a Minitab Worksheet). For the subject line of your email, use “Math 160G Course Project data” so I can easily find all submissions.

## Comments

- Include enough detail for a reader to recreate your results. Assume your readers understand the course material we have seen but have not thought about your particular topic.
- In your writing, reference a figure with something like “From Figure 1, we see that the distribution is. . .”
- Give an honest, critical assessment of the strengths and weaknesses in your study.
- Write in the style of a technical report as opposed to something like a news report.
- A common style for technical writing uses a passive voice as in “A table of random digits was used to select a simple random sample was collected from a list of all UPS students.” It is becoming somewhat more common to use an active voice by writing in the first person as in “I used a table of random digits to select a simple random sample from a list of all UPS students.” You can use whichever style seems best to you.
- Come talk with me if you have questions as you do your analysis and write your report.

**Evaluation and score** In evaluating your course project work, the areas I will consider include the following (with a rough weight given for each):

- the soundness of your study design and implementation (10%)
- the relevance and accuracy of your statistical analysis (25%)
- the reasonableness of your judgments and conclusions in relation to your statistical analysis (25%)
- the precision, accuracy, completeness, coherence, and conciseness of your language (15%)
- the understanding and insight you display (10%)
- mechanics such as grammar, spelling, punctuation, figures, tables, neatness (10%)

In addition, 5% of the project score total will be for preliminary assignments (topic proposal, study design proposal, pilot study report, and descriptive statistics report).