MCS 140/142: PROJECT PROPOSAL FORMAT

Your project proposal should be typed and include the following elements.

**Project Description:** In this section, you state the **what** (objective) and **why** (rationale) for your research. You should clearly state your objective (what are you investigating?) and your rationale (why are you doing this?).

**Data Collection:** In this section, you describe **how** you will collect your data. This section should include the following:

1. **DESIGN**: This should contain sufficient detail so that someone else could repeat your study.
   - What is the population you are studying? What is the size of the population?
   - How will you select your units from the population? If you are doing random sampling or randomization, be specific.
   - What will be your sample size? (You may change this later. As we continue our study of statistics, we’ll learn how to assess sample size.)

2. **VARIABLES**: This should include a complete description of all variables you are measuring and how each variable will be used to answer your research question.
   - Describe each variable, in words.
   - Specify if each variable is quantitative or categorical.
   - Describe, in detail, how you will measure each variable.

3. **CODEBOOK** This tells how you plan to enter data into your spreadsheet.
   - What variable names will you use?
   - What is the expected range of values each variable can take on?
   - Will you be using any codes? (for example, 0=male and 1=female)
   - How will you enter the data in the spreadsheet? How many columns will you have, what will be their names?

**Plans for Data Analysis:** How will you analyze your data?

1. How will you describe the data you get?
   - Each quantitative variable should be described by its distribution and appropriate summary statistics.
   - Each categorical variable should be described using appropriate tables and bar graphs.
   - Relationships between variables should be examined using appropriate graphs, tables, and statistics.

2. How will you answer the research questions you studied? At the time this proposal is due, you may not be able to answer this question. But you should keep this in mind as we learn how to test statistical hypotheses.
   - Try to formulate your questions as statistical hypothesis tests.
   - Glance ahead in the text to see if you can identify a chapter that will tell you how to analyze your data. Check your ideas with me.