This course provides an introduction to statistics. We will address the basics involved in manipulating and analyzing data, and we will work on the sociological interpretation of statistical findings.

THE GOOD NEWS: I am assuming little or no statistical background on the part of students registered in the course – I will be gearing my lectures to the neophyte. If all goes as planned, you will leave this course with an in-depth understanding of a wide variety of statistical concepts and techniques. You will be ready to tackle multiple regression, the starting point of the second course in the graduate statistics sequence.

THE BAD NEWS: Developing an in-depth understanding, even with the most prolific of guides, necessitates practice, practice, practice ... i.e. this course will demand lots of time. Assignments will be numerous; deadlines will be firm; re-writes will be assigned for work that fails to show a thorough understanding of the lesson.

Don't be discouraged. Thomas Edison once said, "As a cure for worrying, work is better than whiskey." This course will keep you calm and sober.

BOOKS

There is one required text for the course. It is available at the Campus bookstore or at the usual online venues. I will also place one copy in the sociology library.


I will use SPSS in this course. I will provide detailed instructions for executing assignments and these help sheets will be posted on our course Sakai site. Healey provides support as well.


If you own another PC package, or prefer to use one of the other packages available through the CSRI, let me know. I am not averse to your using your own materials as long as I am informed.
REQUIREMENTS

Each student will be required to collect his/her own data set.

Your data will consist of information on either the 50 states of the United States or 50-60 nations around the globe.

During the first three weeks of the course, I will devote significant class time toward discussions of data collection and data entry.

Several assignments will determine the final grade:

1) Problem Sets/ Computer Assignments: Class meetings 2-7, will include short problem sets and/or a weekly computer assignment. Assignments will be handed out at the end of each class and will be due at the beginning of the next class. Together, these assignments will account for 30% of the final grade.

2) Mid-Term Examination: The class will include a take-home exam addressing concepts covered in the first half of the course. The exam will constitute 15% of the final grade.

3) Short Papers: Four short papers addressing The Comparison of Two Groups, ANOVA, Chi-Square, and Regression/Correlation respectively will be assigned. In essence, you will analyze your data using each of the techniques, and write a short paper (2-4 pp.) explaining your results. Together, these papers will account for 40% of your grade.

4) Oral Report: During our last class meeting, students will be required to present their Regression assignment to the group. This effort will account for 5% of your grade.

5) Attendance: Class attendance and participation is an expectation of the course. These factors will constitute 10% of your grade.

NOTE: A key component of this class is an emphasis on cooperation over competition. There is bound to be some variability in students' statistical sophistication. Advanced students are encouraged to assist, even tutor, those needing extra help. Tutoring efforts will be considered and rewarded at grade time.
CLASS SCHEDULE

MTG. 1 (1/17): Introduction to the course
   Instructions on Data Collection
   Lab: Establish Department Account at CSRI

Assignment:  SPSS Core Systems User Guide: Sections 3, 5, 7 (read if needed)
   SPSS Guide for Basic Statistics: Chapter 1

MTG. 2 (1/24): Basic Concepts
   Populations vs. Samples
   Descriptive Statistics vs. Inferential Statistics
   Types of Variables/Levels of Measurement
   Lab: Entering Data

Assignment:  Healey: Chapter 1

MTG. 3 (1/31): Sampling
   Lab: Creating samples

Assignment:  Healey: pp. 142-146
   SPSS Core Systems User Guide: Section 9 – Select Cases
   (Note: Next week’s reading is heavy. You might want to start early.)

MTG. 4 (2/7): Displaying and Describing Data
   Tables and Graphs
   Descriptive Statistics
   Dispersive Statistics
   Lab: Application of lecture topics

Assignment:  Healey: Chapters 2, 3, and 4
   SPSS Guide for Basic Statistics: Chapters 2 and 3
MTG. 5 (2/14): Probability

- Probability Distribution
- Normal Distribution
- Sampling Distribution
- Central Limit Theorem

Assignment: Healey: Chapter 5 and pp. 147-153

MTG. 6 (2/21): Confidence Intervals

Assignment: Healey: Chapter 7

MTG. 7 (2/28): Hypothesis Testing

Assignment: Healey: Chapter 8

SPSS Guide for Basic Statistics: Chapter 9 (One Sample T-test)

MTG. 8 (3/7): Review and Distribution of Mid term exams.

MID TERM EXAMS ARE DUE IN THE 3/20/12 CLASS
NO LATE PAPERS WILL BE ACCEPTED!!!!

CUT LOOSE -- SPRING BREAK!!!!

MTG. 9 (3/20): Review of mid terms

- Comparing Two Groups

Lab: t-tests for two groups

Assignment: Healey: Chapter 9

SPSS Guide for Basic Statistics: Chapter 9 (Independent Sample T-tests)
MTG. 10 (3/27): ANOVA

*Lab:* ANOVA

*Assignment:* Healey: Chapter 10

SPSS Guide for Basic Statistics: Chapter 10


Measures of Association

*Lab:* Crosstabs

*Assignment:* Healey: Chapters 11 (skim Chapters 12-13)

SPSS Guide for Basic Statistics: Chapter 5 (Crosstabs) and Chapter 27 (Chi-Square)

MTG. 12 (4/10): Correlation/Association/Linear regression

*Lab:* Scatterplots, Pearson Correlation, and Simple Regression

*Assignment:* Healey: Chapter 14

SPSS Guide for Basic Statistics: Chapters 12 and 16

MTG. 13 (4/17): No formal lecture: Schedule Individual Conferences

MTG. 14 (4/24): Introduction to Multiple Regression and Final Oral Reports

**PAPERS ARE DUE IN THE APRIL 24 CLASS**

**NO LATE PAPERS ACCEPTED!**