

This is a basic course in statistics with applications in urban planning and policy analysis. Topics covered include descriptive statistics, interval estimation, hypothesis testing, analysis of cross-tabulated data, and correlation and regression. In addition to the theory and application of basic statistics, students will be introduced to a statistical software package, SPSS.

Course requirements: Two or three assignments (approximately 10%); mid-term exam (approximately 35%); final exam (approximately 50%). Please note that the final exam is cumulative; it covers material from the entire semester. We will also be engaging in a field project which will require data collection and analysis. Performance on this project will comprise the remainder of the final grade.

Text: Marija J. Norusis, SPSS Guide to Data Analysis.

Jan. 27 Introduction to the course; frequency distributions; measures of central tendency.

Feb. 3 Measures of dispersion.

Feb. 10 *No class; classes meet according to a Thursday schedule.*

Feb. 17 Introduction to SPSS.

Feb. 24 Sampling distributions; the central limit theorem; the law of large numbers.

Mar. 3 Interval estimation.

Mar. 10 Interval estimation (cont.); sample size.

Mar. 17 Hypothesis testing.

Mar. 24 Hypothesis testing (cont.).

Mar. 31 Hypothesis testing (cont.).

Apr. 7 Mid-term exam.

Apr. 14 *No class; spring break.*

Apr. 21 Analysis of cross-tabulated data.

Apr. 28 Analysis of cross-tabulated data (cont.).

May 5 Correlation and regression.

May 12 Correlation and regression (cont.)

May 19 Final exam.

### **Readings from SPSS Guide to Data Analysis**

#### **Dates and Chapter Titles:**

##### For Feb. 17:

- Introduction
- An Introductory Tour of SPSS
- Counting Responses
- Computing Descriptive Statistics
- In the Appendix “Transforming and Selecting Data”:
  - Data Transformations
  - Transformations at a Glance
  - Saving Changes
  - Recoding Values

##### For Feb. 24:

- Evaluating Results from Samples

##### For Mar. 17, 24, and 31:

- Testing a Hypothesis about a Single Mean
- Testing a Hypothesis about Two Independent Means
- Testing a Hypothesis about Two Related Means

##### For Apr. 21 and 28:

- Counting Responses for Combinations of Variables
- Comparing Observed and Expected Counts

##### For May 5 and 12:

- Linear Regression and Correlation
- Testing Regression Hypotheses