



Spring 2003
DAY COURSE

Instructor: R. INSLEY (SSC K 10552)
Lab Instructor: R. INSLEY (SSC K 10552)

Prerequisites:

A research methods course such as SA 255, CRIM 120, POL 213 or equivalent is recommended. Students in Sociology and Anthropology are expected to take SA 255 before this course. Students with credit for ARCH 376, BUEC232 (formerly 332) or STAT 270 may not subsequently receive credit for this course. Students with credit for any of STAT 101, 102, or 103 may not take this course for further credit.

Textbook:

Elementary Statistics in Social Research (9th ed) by Jack Levin & James Fox, Addison-Wesley

Calendar Description:

An introductory course in descriptive and inferential statistics aimed at students in the social sciences. Scales of measurement. Descriptive statistics. Measures of association. Hypothesis tests and confidence intervals.

Outline:

Aimed at a non-mathematical audience, this course discusses procedures that are most commonly used in research in the social sciences. The rationale for these procedures is explained in detail but the use of mathematical formulas is kept to a minimum. STAT 203 is a satisfactory prerequisite for STAT 302.

1. The Design of a Statistical Study

The two major design types, controlled experiments and observational studies, are discussed, with special emphasis on the limitations of each. The practical necessity of observational studies in social sciences research is discussed.

2. Descriptive Statistics

The following methods of summarizing the information in large datasets are introduced: histograms and other graphs, averages, standard deviations, and the normal approximation. Applications to the summary of social and political surveys.

3. Correlation and Regression

The correlation coefficient is introduced as a measure of the strength of association between two quantities; the regression line, as a graph of averages. Deviations from this line are discussed. Use of these techniques in formulating causal hypotheses based on studies in social sciences.

4. Probability

Methods are presented for computing the probabilities of chance occurrences. Examples are introduced which explain how probability is used to model the unpredictability of human responses.

5. Chance Variability