

Political Data Analysis

Political Science 201

Spring 2010

Dr. John Watson

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Office: BSB 1170B; Class: BSB 335

Office Hours: TU/TH 9:15-10:15 AM

201 Political Data Analysis

3 hours. Introduction to basic elements of statistics and data analysis for political science. Includes descriptive and inferential statistics; introduction to UIC computer facility and statistics software. **Prerequisite(s):** MATH 090 or MATH 092 or MATH 118. **Meets TU/TH 8:00-9:15 AM**

I. Introductory Statement

Americans have a love-hate relationship with statistical analysis. Sports fans can't seem to get enough them, devouring slugging percentages, batting averages and quarterback ratings. Business and advertising use it to better market their products and increase profit margins. And people sometimes loathe the way statistics are manipulated to support almost any conclusion, as exemplified by one of Mark Twain's most famous quips of escalating mendacity, "lies, damned lies, and statistics."

This course is designed to help students understand when, how and why to use statistical analysis, and to provide them with the necessary skills to evaluate the statistical analyses they encounter in their studies and their everyday lives.

Among the topics covered in this course will be descriptive statistics, probability theory, standard error and deviation, the t-test, the Chi-square test, time series, and multiple regression analysis. The computer program SPSS (Statistical Package for the Social Sciences) will be utilized for project work, giving students the opportunity to learn statistical analysis by doing it.

II. Course Format

The course will consist of weekly classroom lectures and occasional computer lab sessions. The course requires basic knowledge of mathematics, so please note the instructional prerequisites: MATH 090 or MATH 092 or MATH 118. A teaching assistant, Ms. Heidi Lawson, is available throughout the semester to assist students with the course content. Please make us aware of any special needs at the earliest convenience. Student performance will be evaluated on the basis of an assigned project, a mid-term exam, and a final exam. The project will consist of a statistical analysis performed using SPSS data and software.

III. Readings and Materials

1. *Elementary Statistics in Social Research*, Jack Levin, James Alan Fox, David R. Forde, (Allyn & Bacon, 2010)
2. *A Simple Guide to SPSS For Windows Version 16.0*, Lee A. Kirkpatrick and Brooke C. Feeney, (Thomson Wadsworth, 2009)
3. Class handouts, as given and assigned

IV. Computation of Course Grade

Project	33%
Mid-term Exam	33%
Final	33%

V. Weekly Course Schedule

Week One:

01/12: Introduction to the course

Lecture: Overview of course: Statistical analysis, variation, central tendencies, variables, measurement

01/14: Why the Social Researcher Uses Statistics

Read: Chapter One (C1) in *Elementary Statistics in Social Research (ESSR)* by Levin et al.

Week Two:

01/19: Organizing the Data

Read: C2 *ESSR*

01/21: Measures of Central Tendency

Read: C3 *ESSR*

Week Three:

01/26: Measures of Variability

Read: C4 *ESSR*

01/28: Probability and the Normal Curve

Read: C5 *ESSR*

Week Four:

02/02: Probability and the Normal Curve

Read: C5 *ESSR*

02/04: Samples and Populations

Read: C6 *ESSR*

Week Five:

02/09: Samples and Populations

Read: C6 *ESSR*

02/11: LAB: SPSS

Read: C1-6 *SPSS*

Week Six:

02/16: Testing Differences between Means

Read: C7 *ESSR*

02/18: Testing Differences between Means

Read: C7 *ESSR*

Week Seven:

02/23: Analysis of Variance

Read: C8 *ESSR*

02/25: Analysis of Variance

Read: C8 *ESSR*

Week Eight:

03/02: LAB: SPSS

Read: C7-11 *SPSS*

03/04: Review for Mid-term Exam

Week Nine:

03/09: MID-TERM EXAM

03/11: Nonparametric Tests of Significance

Read: C9 *ESSR*

Week Ten:

03/16: Nonparametric Tests of Significance

Read: C9 *ESSR*

03/18: LAB SPSS

Read: C12-13 *SPSS*

Week Eleven:

03/23: SPRING BREAK: NO CLASS

03/25: SPRING BREAK: NO CLASS

Week Twelve:

03/30: Correlation

Read: C10 *ESSR*

04/01: Correlation

Read: C10 *ESSR*

Week Thirteen:

04/06: LAB SPSS

Read: C15 *SPSS*

04/08: Regression Analysis

Read: C11 *ESSR*

Week Fourteen:

04/13: Regression Analysis

Read: C11 *ESSR*

04/15: LAB SPSS

Read: C15-16 *SPSS*

Week Fifteen:

04/20: Nonparametric Measures of Correlation

Read: C12 *ESSR*

04/22: Choosing Statistical Procedures for Research Problems

Read: C13 *ESSR*

Week Sixteen:

04/27: LAB SPSS

04/29: Review for Final Exam; Project assignment due

FINAL:

05/07: 8:00 AM