University of Texas at Austin
GOV 350K: Statistical Analysis in Political Science (38705) - Fall 2012

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Course Overview:

This course introduces basic concepts and methods of statistics. Unlike the typical elementary statistical courses you may have taken, the emphasis here will be on applications in political science. The objective of this course is to help students acquire the literacy for understanding political science literatures based on the scientific approach, as well as to prepare interested students for more advanced methods courses. Topics include descriptive statistics, probability and probability distributions, sampling, sampling distribution, point estimation, confidence intervals, hypothesis testing, analysis of variance, contingency tables, correlation, and simple regression. Computing will be an integral part of this course. You will use SPSS to analyze data from Gallup Survey, General Social Survey, and/or National Election Study in homework assignments. In particular, you will be asked to replicate results reported in journal articles and book chapters. You are also encouraged to develop and work out your own research problems. There are no prerequisites for this course.

Grading Policy:

Homework Assignments (6 sets graded): 5% each set
In-Class Midterm Exam (October 17): 30%
In-Class Final Exam (Officially Scheduled on Tuesday, December 18, 2:00-5:00pm): 30%
Instructor's Discretion (Attendance, Participation, etc.): 10%

Notes: (1) Plus/minus grades will be assigned for the final grade. (2) Students are allowed to work together on homework questions, but they should write their assignments independently. (3) The midterm exam will be a three-hour session scheduled on October 17; an alternative session may be scheduled for students who cannot make this date.

Required Texts:

[W&W] T. H. Wonnacott and R. J. Wannacott. 1990. *Introductory Statistics*, 5th Ed. Wiley. (Or 4th ed., *Introductory Statistics for Buisness and Economics*, 1990, which is the same as the 5th Ed.)

[JSTOR]/[Blackboard] In addition, a number of journal articles and book chapters are assigned as required readings. Most of these papers are political science applications of the statistical methods to be introduced. These papers are included primarily for use in homework assignments, and they often include parts that are beyond the scope of this course. These readings will be discussed in class only if time allows. Most of the papers are available online at JSTOR (http://www.jstor.org); others will be posted on the class Blackboard (https://courses.utexas.edu/). Reading these materials will help you get a better grip on the statistical concepts and methods introduced in this class. Lecture notes will also be posted on Blackboard.

Optional: [SPSS] S. B. Green and N. J. Salkind, 2011. *Using SPSS for Windows and Macintosh: Analyzing and Understanding Data*, 6th ed. Prentice Hall.

Students with Disabilities:

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259. For more information, visit http://www.utexas.edu/diversity/ddce/ssd/.

University Honor Code:

The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Unauthorized collaboration and plagiarism are strictly prohibited. For definitions and examples of unauthorized collaboration and plagiarism, visit http://deanofstudents.utexas.edu/sjs/acint_student.php

Accommodations for Religious Holidays:

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Emergency Evacuation Policy:

Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.

Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.

In the event of an evacuation, follow the instruction of faculty or class instructors.

Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

Behavior Concerns Advice Line (BCAL): 232-5050
Emergency Information Web Site: http://www.utexas.edu/emergency

Course Outline and Reading Assignments:

<u>Week 1</u> Introduction
8/29: W&W, Chapter 1.

<u>Week 2</u> Univariate Descriptive Statistics / SPSS Computing
9/3: Labor Day Holiday
9/5: W&W, Chapter 2.
SPSS, Lessons 1-11.

Week 3 Univariate Descriptive Statistics / SPSS Computing
9/10: [JSTOR] Aldrich et al., 1989. AForeign Affairs and Issue Voting.@ *APSR*.* 83:123-141.
[JSTOR] Krehbiel, 1990. AAre Congressional Committees Composed of Preference Outliers?@ *APSR*, 84:149-163.
9/12: SPSS, Lessons 12-15.
[Blackboard] 1984 AGallup Survey Questionnaire@

Week 4 Univariate Descriptive Statistics / SPSS Computing
9/17: Lab Session (Meet at BUR 120/124)
SPSS, Lessons 16-21.
9/19: Review of Descriptive Statistics

Week 5 SPSS Computing / Probability
9/24: Lab Session (Meet at BUR 120/124)
9/26: W&W, Sections 3-1, 3-2, 3-3, 3-4, 3-5.
[JSTOR] Davis and Davenport, 1999. AAssessing the Validity of the Post-Materialism Index.@ *APSR*, 93(September).

Week 6 Probability Distributions
10/1: W&W, Sections 4-1, 4-2, 4-3.
10/3: W&W, Sections 4-4, 4-5, 4-6.

Week 7 Probability Distributions
10/8: W&W, Sections 5-1, 5-2, 5-3.
10/10: W&W, Sections 5-4.
SPSS, Lesson 40

Week 8 Review & Midterm Exam
10/15: Review and Catch-up
10/17: Midterm Exam

Week 9 Sampling and Sampling Distribution
10/22: Discussion of Midterm Exam
10/24: [Blackboard] Goel (1988), ASampling.@ Chapter 5 of his *Political Science Research*.

Week 10 Point Estimation
10/29: W&W, Sections 6-1, 6-2, 6-3, 6-4.
10/31: W&W, Chapter 7.

Week 11 Confidence Intervals
11/5: W&W, Sections 8-1, 8-2, 8-5.
11/7: W&W, Sections 8-3, 8-4.
[JSTOR] Sullivan et al., 1990. ACandidate Appraisal and Human Nature: Man and Superman in the 1984 Election.@ *Political Psychology*, 11:459-484.

Week 12 Hypothesis Testing
11/12: W&W, Sections 9-1, 9-2.
11/14: W&W, Sections 9-3, 9-4.

Week 13 Hypothesis Testing

11/19: W&W, Section 9-6.
[JSTOR] Krehbiel, 1990. AAre Congressional Committees Composed of Preference Outliers?@ *APSR*, 84:149-163.
11/21: SPSS, Lessons 22-24.

Week 14 Analysis of Variance
11/26: W&W, Sections 10-1.
11/28: SPSS, Lesson 25.

Week 15 Testing Relationships for Nominal Data
12/3: W&W, Chapter 17
SPSS, Lessons 41.
[Blackboard] Dahl, 1984. APolitical Regimes: Popular and Hegemonic.@ Chapter 7 of his *Modern Political Analysis*.
12/5: Review & Catch-up

Week 16-17 Final Exam (Officially Scheduled on Tuesday, December 18, 2:00-5:00pm)