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Course Overview:

This course introduces basic concepts and methods of statistics with 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, contingency tables, correlation, and simple bivariate and multivariate regression.

Computing will be an integral part of this course. You will use “Stata” to analyze data from a variety of commercial and media polls e.g., the Gallup Survey, as well as established academic polls such as the General Social Survey and National Election Study in homework assignments. You are encouraged to develop and work out your own research problems in a required term paper.

There are no prerequisites for this course.

Grading Policy:

Grades will be based on the following:

• Homework Assignments (4-6 graded): 5% each set
• Midterm Exam (Thursday, October 13th): 25%
• Term paper based on original analysis of data: 20% (Due: December 1st)
• Final Exam (Officially Scheduled at Friday, December 9th, 9:00-12:00 noon): 25%
• Instructor’s Discretion (Attendance, Participation, etc.): 10%

Note: You must complete all parts of this course to earn a passing grade.

The Text (and Software):

The primary textbook for this class is Thomas Dietz & Linda Kalof (2009) *Introduction to Social Statistics*. West Sussex, UK: Wiley-Blackwell. It’s available new on Amazon for $100 and Barnes and Noble for $95. It can be found used on-line for about half that price. While this is an expensive book, it is 50-80% less than many other comparable statistics textbooks.

We will be using Stata statistical software to conduct analysis of real data. You may choose to use it on one of the campus servers or decide you want your own copy either as a semester/annual “rental” or as a permanent purchase. (A new version, Stata 12, has just been released. Campus servers may continue to offer Stata 11. Version is not important.)

Stata comes with an extensive help system but you may be more comfortable with a manual that shows you some of the basics. Hence, I recommend considering one other text: Alan C. Acock (2010) *A Gentle Introduction to Stata* (3rd edition). This is available from Stata Press for $48. (http://www.stata.com/bookstore/acock3.html)

Advice:

Stay ahead of me on the readings so you can be ready to ask questions when we get to material you don’t understand. Don’t be afraid to ask in class. Chances are you are not the only person with the same question. This is the type of class that if you fall too far behind it’s very difficult to catch up.

Please use your TA for help. That’s her job. To help you get through this class.

Shocking as it may seem, statistics can be fun. Oftentimes the challenge is to find a topic that is relevant to you to make it work. We can make this apply to anything from TX weather to the UT football team (as well as the operation of the TX and Federal government).
University Policies

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:

**Week 1: Introduction**

Statistics in Political Science & Politics
D&K, Preface, Chapters 1 & 2.
Kmenta, Chapter 1

**Week 2: Univariate Descriptive Statistics**

Distributions: D&K, Chapter 3
Central Tendency & Variability: D&K, Chapter 4
Introduction to Stata (Acock, Chapters 1, 2 & 5)

**Week 3 Theory and Data**

Value of Theory
D&K, Chapter 5 – Plotting Relationships & Conditional Distributions
D&K, Chapter 6 – Causation


**Week 4 Where Do Data Come From? (Research Design)**

Cross-sectional versus Time Series Designs

Experiments & Quasi Experiments in Political Science
Feline Reactions to Bearded Men

Archival and Case Study Research

Validity vs. reliability

Real World Datasets: GSS, ANES, Gallup, CBS/NYT

**Week 5 Conceptualization & Measurement**

Anthony Downs and the ANES. Testing Theory by Identifying Empirical Referents for Key Concepts

Stata: Acock, Chapter 3-4
Keeping a Lab Notebook: Guidelines

**Week 6 Probability & Probability Distributions**

D&K, Chapter 7

**Week 7 Sampling and Sampling Distribution (Inferential Statistics)**

D&K, Chapter 8
Kmenta, Chapter 2 (Empirical Distributions)

M&M’s and Sampling Theory

**Week 8 1st Half Summary**

Catch-up, Review & Midterm Exam

**Week 9 Confidence Intervals**

Discussion/Review of Midterm Exam

D&K, Chapter 9 – Confidence Intervals

**Week 10 Hypothesis Testing**

D&K, Chapter 10 – Hypothesis Testing

**Week 11 Analysis of Variance**

D&K, Chapter 11 – Analysis of Variance
Stata: Acock, Chapter 9

**Week 12 Contingency Tables I** (Testing Relationships for Nominal and Ordinal Data)

D&K, Chapter 12 – Tables
Walter Stone & David Davis, An Introduction to Quantitative Research Methods, Chapter 1
Indick et al. (2000) “Gender Differences in Moral Judgment” Current Research in Social Psychology
Stata: Acock, Chapter 6

Week 13 Contingency Tables II – Elaboration

Walter Stone & David Davis, An Introduction to Quantitative Research Methods, Chapter 2

Writing a (Social) Scientific Paper:
Johnson & Reynolds, Political Science Research Methods, Chapter 14
A sample outline using Down’s theory of voting as a paper topic.

Week 14 Testing Relationships for Interval Data: Correlation and Regression

D&K, Chapter 13 – Correlation / Bivariate regression
Stata: Acock, Chapter 8

Week 15 Multiple Regression

D&K, Chapter 14 – Multiple regression
Stata: Acock, Chapter 10

Final Exam: Friday, December 9th, 9:00-12:00 noon