Introduction to Statistics and Data Analysis I
Instructor: Lee D. Walker
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Department of Political Science
Meeting Time: Monday to Friday 2:30PM-4:30PM
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Description
This course is an introduction to statistics, probability and data analysis. Topics include properties of data, probability theory, properties of random variables, probability distributions, sampling distributions, Confidence intervals, significance test, and inferences for means of populations. Lectures will be informal and center on daily readings and homework assignments.

Homework assignments will be given daily based on the class coverage. Homework assignments will be handed out in class. Formation of groups is encouraged, but participants must individually work assigned problems. Several of the homeworks require use of computer software. SPSS and Stata are good choices, though you are welcome to adopt whatever other software package that you choose. These computer assignments will be collected and graded. Individual help will be available during the day for students that need such help. Details for the homeworks will be announced in class.

Texts
Required:
• This course will cover Chapters 1-12 of the required text.
Recommended:

Grading
Final grades for participants that take the course for credit will be determined by performance on homework assignments (40% of the grade), a midterm exam (30% grade) and a final exam (30% of the grade). Grading will be based on a total of 100 points.

Course Schedule

• Day 1: Looking at Data Graphically—Chapters 1 and 2.
• Day 2: Looking at Data Numerically—Chapter 3.
• Day 3: Introduction to Probability—Chapters 4.
• **Day 4:** Conditional Probability—Chapter 4.

• **Day 5:** Counting Rules and Random Variables—Chapter 4 and 5.

• **Day 6:** Binomial and Poisson Distributions—Chapter 5.

• **Day 7:** The Normal Distribution—Chapter 6.

• **Day 8:** The Normal Distribution, continued—Chapter 6.

• **Day 9:** Sampling Distribution and Central Limit Theorem—Chapter 7.

• **Day 10:** MIDTERM EXAMINATION

• **Day 11:** Estimating With Confidence: Confidence Intervals—Chapter 8.

• **Day 12:** Test of Significance: Inference about the mean of a Population—Chapter 9.

• **Day 13:** Inference about the Mean of a Population, continued—Chapter 9.

• **Day 14:** More on Inference for the Mean of a Population: Inferences for Two Population Means—Chapter 9 and start of Chapter 10.

• **Day 15:** Comparing Two Means, continued—Chapter 10.

• **Day 16:** Comparing Two Mean and Introduction to Inferences for Population Proportions—Chapter 10 and 12.

• **Day 17:** Catch-up and Review

• **Day 18:** FINAL EXAMINATION.