

Cleveland State University
Levin College of Urban Affairs
Department of Urban Studies
Instructor: Winifred Weizer
Office hours: (UR217) By appointment
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**Urban Data Analysis (UST 404 Section 50)
Fall Semester, 2005 Wednesday 6-10 pm**

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Course Description: This course is designed to introduce the student to the basic principles, techniques and the logic of data analysis. It also will familiarize the student with statistical reasoning. This course focuses on core statistical concepts and techniques that are used in many fields. The course is designed for urban students who have never had a course in statistics.

Course Objective: The objective of the course is to prepare the student to hopefully become a producer of empirical analyses in the future. At the very least, the course will allow the student to become an informed consumer of statistics.

Course Requirements: Students are expected to attend all class periods, turn in homework assignments when due, complete all learning enhancers and the midterm and final. The student will also do a short project and present the results to the class. Since the class meets once a week, attendance is critical to the student being successful.

Grading Policy: Grades are based on the results of homework, learning enhancers, project, tests and class participation. Homework questions are noted on the syllabus with due dates. A penalty of 5% per week will be assessed on homework that is turned in late. Final dates for homework submission are also noted on the syllabus. The three learning enhancers will be given as noted in the syllabus. There will also be two tests given (a midterm and the final). The grade will consist of the following;

Attendance	10%
Homework	15%
Project	15%
3 learning enhancers	15%
Midterm	20%
Final	25%

Exam attendance is required. Makeup exams will only be given with the prior approval of the instructor.

Change in schedule: This syllabus is a *guide* to the semester schedule. The instructor reserves the right to change this syllabus and any of its contents at any time during the course by notifying students verbally or by written addendum.

Text: Triola, Mario F. 2001 Elementary Statistics 9th Edition
New York, NY: Addison-Wesley

Class Schedule and Readings (Note: Homework problems are EVENS ONLY unless otherwise noted.)

August 31: Course introduction, Nature of Data, Use and Abuse of Statistics, Design of Experiments

Read: Section 1-1, 1-2, 1-3, 1-4, 2-1, 2-2, 2-3, 2-4, 2-5,

Homework #1 (Due 9-7): Exercise 1-2 Do 1 to 20 and #22, Exercise 1-3 Do 1 to 16 and problem 25, and Exercise 1-4 Do 1 to 26

September 7: Summarizing Data and Pictures of Data, Measures of Center, Measures of Variation, Use of Statdisk

Read: Section 2-6, 3-1, 3-2, 3-3

Homework #2 (Due 9-14): Exercise 2-2 Do 1 to 14, Exercise 2-3 DO 1 to 16 Exercise 2-4 Do 1 to 4 and 9 to 12, and # 22

September 14: Measures of Relative Standing, Probability – Introduction, Fundamentals, and the Addition Rule, Learning Enhancer Review

Homework #3 (Due 9-21): Exercise 2-5 Do 1 to 4 and 9 - 14, and 40, Exercise 2-6 Do 1 to 10 Exercise 3-2, Do 1 to 18

September 21: Learning Enhancer #1, Covers Chapter 1 and 2; Group 1 Oral Presentations

Read: 3-4, 3-5, 4-1, 4-2, 4-3, 4-4

Final day to turn in homework for Chapter 1 and 2

September 28: Probability – Multiplication Rule, Complements and Conditional Probability, Random Variables. Binomial Probability Distributions, Mean Variance, and Standard Deviation for Binomial Probability Distributions,

Read: Section 5-1, 5-2, 5-3,

Homework #4 (Due 10-5): Exercise 3-3 Do 1 to 20, Exercise 3-4 Do 1 to 4 and 8 to 20, Exercise 3-5 Do 1 to 20, Exercise 4-2 Do 1 to 10, Exercise 4-3, Do 1 to 24, Exercise 4-4, Do 1 to 10

October 5: The Standard Normal Distribution, Applications of Normal Distributions, Learning Enhancer 2 Review

Homework #5 (Due 10-12): Exercise 5-2 Do 10 to 28, Exercise 5-3 Do 1 to 14

October 12: Learning Enhancer #2 (Covers Chapters 3 and 4); Group 2 Oral Presentations

Read: Section 5-4, 5-5,

Final day to turn in homework for Chapter 3 and 4

October 19: Normal Distributions: Sampling Distributions and Estimators, The Central Limit Theorem, Midterm Review

Homework #6 (Due 10-26): Exercise 5-5 Do 1 to 16

October 26: Midterm, (covers Chapters 1 – 4); Group 3 Oral presentations

Read: Section 6-1, 6-2, 6-3, 6-4

November 2: Estimating a Population Proportion, Estimating a Population Mean: Population Standard Deviation Known, Estimating a Population Mean: Population Standard Deviation Not Known, Determining Sample Size Required to Estimate,

Read: Section 7-1, 7-2, 7-3, 7-4, 7-5

Homework #7 (Due 11-9): Exercise 6-2 Do 1 to 24, Exercise 6-3 Do 1 to 28, Exercise 6-4 Do 1 to 18

November 9: Fundamentals of Hypothesis Testing, Testing a Claim About a Proportion, Testing a Claim About a Mean: Population Standard Deviation Known, Testing a Claim About a Mean: Population Standard Deviation Not Known

Read: 9-1, 9-2, 9-3

Homework #8 (Due 11-16): Exercise 7-2 Do 2 to 24, Exercise 7-3 Do 1 to 8, Exercise 7-4 Do 1 to 16, Exercise 7-5 Do 1 to 12

November 16: Learning Enhancer #3 covers Chapter 5 and 6; Group 4 Oral Presentations

Read: Section 9-1, 9-2, 9-3

Final day to turn in homework for Chapter 5 and 6

November 23: Correlation and Regression; Final Oral Presentations

Read: Section 10-1, 10-2, 10-3

Homework #9 (Due 11-30): Exercise 9-2 Do 1-10, Exercise 9-3 Do 1 to 10

November 30: Multinomial Experiments: Goodness of Fit, Contingency Tables: Independence and Homogeneity

Read: Section 12-1, 12-2, 13-6

Homework #10 (Due 12-7): Exercise 10-2 Do 1 to 6, Exercise 10-3 Do 1 to 6
Project Paper Due

December 7: Sign Test, Spearman's Rank Correlation; Final Review

December 14: Final 6-9 pm

Note: Students are strongly encouraged to email the Instructor with questions or problems they may be having. I am on campus most days of the week. I check my email

on a daily basis even when I am not on campus. Many questions can be resolved if you email me. I am happy to respond.

University Policies

Students should refer to the Undergraduate Bulletin for procedures regarding add/drop and withdrawals.

Physically challenged/Special Needs

Students with special needs (physical handicaps, learning disabilities, English as a second language) should identify themselves so that the appropriate arrangements can be made.