

Economics 83A, Summer 2008

STATISTICS AND ECONOMIC ANALYSIS

Instructor: Xia Meng

Overview: This course is designed to provide a working knowledge of the analytical tools of probability and statistics used in economic analysis. Some of the topics that we will cover include descriptive statistics, probability theory, the Central Limit Theorem, confidence intervals, hypothesis testing and an introduction to regression analysis.

Course Meeting Times: Monday, Tuesday, Thursday 8:45-11:15am, Lemberg 54

Office Hours: Tuesday, Thursday 1:00-5:00pm, PhD room or by appointment

Email: xiameng@brandeis.edu

Textbook: The required textbook for this course will be: Wonnacott, Thomas H. And Ronald J. Wonnacott, *Introductory Statistics for Business and Economics*, Fourth Edition, John Wiley & Sons, New York, 1994.

Course Requirements and Grading Policy: Participation in all lectures, the completion of course assignments, quizzes, one midterm and a final exam. The quizzes and exams will be closed book, closed note. Grading in the course will be based on the following 4 parts:

1. Assignments (20% of the grade) — I will assign 4 assignments. You are required to turn in all of these exercises and do these exercises on your own. Assignments will be due in class (due dates are given in the syllabus). Generally no late assignments expected .

Assignment #1, assigned Thu, Jun. 5, due Mon, Jun. 9.

Assignment #2, assigned Thu, Jun. 12, due Mon, Jun. 16.

Assignment #3, assigned Thu, Jun. 19, due Mon, Jun. 23.

Assignment #4, assigned Thu, Jun. 26, due Mon, Jun. 30.

2. Quizzes (10% of the grade)—I will give 2 quizzes which will not be announced in advance. The purpose of the quizzes is to keep you on track with the course. Quiz questions will be based on lecture notes and assignments.

3. Midterm exam (30% of the grade)—There will be one in-class midterm exam which approximately divides the course content into two halves.

4. Final exam (40% of the grade)—to be held in the last class. The exam will cover all course content and will be based on the textbooks, lecture notes, assigned readings, problem sets, and quizzes.

There will be absolutely no makeup quizzes; there is no scheduled make-up midterm or final exam. If you have any conflicts with any of the exams, please let me know ASAP. If you miss an exam without an acceptable legal document/reason (for example: a written certificate from a medical or legal authority), no makeup exam will be given.

Additional Requirements: You will be required to purchase a NON-PROGRAMMABLE calculator for this class. This will be the ONLY calculator that will be allowed for use in the exams. There will be no exceptions to this rule. This means that you may NOT bring in a programmable graphing calculator (whether or not you can show that there are no stored programs). Your calculator should be able to perform square roots, but nothing more complicated will be necessary. (In general, the \$5 calculator available at a drugstore will suffice.) If your calculator does not meet these specifications during an exam, you will have to do without a calculator for the exam.

Academic Honesty: You are expected to be honest in all of your academic work. Potential sanctions include failure in the course and suspension from the university. If you have any questions about my expectations, please ask.

Disability Information: If you are a student with a documented disability at Brandeis University and if you wish to request a reasonable accommodation for this class please see me immediately. Please keep in mind that accommodations are not provided retroactively.

LATTE: problem sets, quizzes, midterm and final will be posted on LATTE, as well as the solutions.

COURSE OUTLINE

(You are encouraged to read the chapters listed for each lecture before class, although the course will not cover all the content of those chapters. Details on readings will be updated before the Summer School begins.)

Date	Topics and Assigned Readings
Jun. 2 (Mon)	<i>Introduction: The role of probability and statistics in economic analysis; Descriptive Statistics: Frequencies, measures of central tendency and dispersion. Read: W&W chp1-2</i>
Jun. 3 (Tue)	<i>Introduction to Probability, Conditional Probabilities, Bayes' Theorem; Read: W&W chp 3</i>
Jun. 5 (Thr)	<i>Introduction to Random Variable, Probability Distributions for Discrete and Continuous Random Variables Read: W&W chp 4</i>
Jun. 9 (Mon)	<i>Functions of a Single and Several Random Variables Read: W&W chp 5</i>
Jun. 10 (Tue)	<i>Sampling Properties Read: W&W chp 6</i>
Jun. 12 (Thr)	<i>Point Estimation Read: W&W chp 7</i>
Jun. 16 (Mon)	<i>Confidence Intervals Read: W&W chp8</i>
Jun. 17 (Tue)	MIDTERM IN CLASS (Chp1-Chp7)
Jun. 19 (Thr)	<i>Hypothesis Testing Read: W&W chp9</i>
Jun. 23 (Mon)	<i>Introduction to Regression Analysis: the Idea Behind "Fitting A Line" Read: W&W ch11</i>
Jun. 24 (Tue)	<i>Simple Bivariate Regression Model Read: W&W ch12</i>
Jun. 26 (Thr)	<i>Multiple Regression Read: W&W chp13</i>
Jun. 30 (Mon)	<i>Multiple Regression: Extensions Read: W&W chp14-15</i>
Jul. 1 (Tue)	<i>Introduction to STATA; Review for Final Exam</i>
Jul. 3 (Thr)	FINAL IN CLASS