

Brandeis University
Department of Economics
Fall 2008

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ECONOMICS 83A
STATISTICS FOR ECONOMIC ANALYSIS
PRELIMINARY SYLLABUS

Course description: This course provides an introduction to probability and statistics. By the end of the semester, you will be better able to assess statistical findings reported in the media, read the professional economics literature, and organize and use data for your own research projects. Topics include descriptive statistics, probability theory, sampling theory, estimation, statistical inference, and regression analysis. You will also learn to use STATA, one of the statistical packages commonly used in economic research.

Course meeting times: Section 1: MWTh 12:00-1:00; Section 2: MWTh 1:00-2:00.

Recitation: W 6:40-8:30.

Office hours: TBA.

Prerequisites: Introduction to Economics (Economics 2a).

Textbook: The required textbook for this course is David R. Anderson, Dennis J. Sweeney, and Thomas A. Williams, *Statistics for Business and Economics*, 9e (South-Western, 2005). The textbook will be supplemented with outside readings and handouts, all of which will be available on the course website.

Course Requirements and Evaluation: Class and recitation attendance is expected. Final course scores will be determined according to the following formula and final grades according to a curve of the scores.

Midterm I	25%
Midterm II	25%
Final	35%
Cases	15%

Sample exams will be posted on the class website. The cases are homework exercises that have you apply the methods developed in class to economic questions. In addition to the above, classroom participation can influence your final grade by up to 5%.

Accommodations: If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.

Academic Integrity: You are expected to be familiar with and to follow the University's policies on academic integrity (see http://www.brandeis.edu/global/current_academic_integrity.php). Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University.

TENTATIVE COURSE OUTLINE

8/28:	Introduction and Course Organization.	ch. 1
I.	Descriptive Statistics and Introduction to Stata.	
9/3:	Introduction to Data and Stata.	Brief Guide to Stata
9/4:	Graphical Methods.	ch. 2.1-2, 2.4
9/8 & 10:	Numerical Methods.	ch. 3.1-6
II.	Probability Theory and Probability Distributions.	
9/11 & 15:	Introduction to Probability Theory.	ch. 4.1-2
9/17 & 18:	Relationships in Probability.	ch. 4.3-5
9/22 & 24:	Discrete Probability Distributions.	ch. 5.1-4
9/25 & 10/2:	Continuous Probability Distributions.	ch. 6.1-2
10/6 & 8:	Joint Probability Distributions.	
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Midterm I on Sections I and II.		
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III.	Sampling Distributions (10/13 & 15).	ch. 7
IV.	Confidence Intervals (10/16 & 20).	ch. 8
V.	Hypothesis Testing.	
10/22:	Null and Alternative Hypotheses.	ch. 9.1
10/23:	Type I and Type II Errors.	ch. 9.2
10/27 & 29:	Hypothesis Testing.	ch. 9.3-7
10/30 & 11/3:	Differences between Means and Proportions.	ch. 10.1-4
11/5 & 6:	Inference about Population Variances.	ch. 11
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Midterm II on Sections III - V.		
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VI.	Simple Linear Regression.	
11/10 & 12:	The Simple Linear Regression Model.	ch. 14.1-2
11/13, 17, 19:	Inference about Model Parameters.	ch. 14.3-5
11/20:	Inference with the Model.	ch. 14.6
VII.	Multiple Regression.	
11/24:	The Multiple Regression Model.	ch. 15.1-2
11/26 & 12/1:	Inference about the Model.	ch. 15.3-6
12/3 & 4:	Dummy Variables.	ch. 15.7
12/8:	Other Extensions.	ch. 16.1

Final Exam on Sections VI - VII.
