

BOSTON COLLEGE
DEPARTMENT OF ECONOMICS

EC 151.07
Statistics
Fall 2001
M/W/F 1pm
Fulton 115

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Office Hour: Mon 2-4pm

Course Description:

This is an introductory course in statistics. The primary goal of this course is to introduce students to important statistical concepts and their applications. Students are expected to get familiar with basic statistical terminology, methodology and the application of basic statistical tools. The mathematical prerequisite is some knowledge of algebra.

Textbook:

Anderson, Sweeney and Williams (ASW), *Essentials of Statistics for Business and Economics* (2nd edition). This is a required textbook for the course.

Course Requirements:

Problem Sets (10%)
In class Quizzes (15%)
First Midterm (20%) on Oct. 1st at 4pm
Second Midterm (20%) on Nov. 12th at 4pm
One Final (35%) on Dec. 14 at 9am

Problem sets will be handed out during classes regularly. Some of the questions are computer exercises. Excel is the program that students are encouraged to use. Students may consult fellow students on problem sets but each student is responsible to write his or her own answer. Homework would be collected at the beginning of the classes on due day. No late homework is accepted. Homework is considered useful practices to learn the materials. You donot need to do perfect to get the full credit for problem sets. There will be some short in class quizzes throughout the semester. Dates would be announced in class.

This course is hierarchical, with each section dependent on the previous ones. Therefore, it is very important to keep up with the material in this course. Although attendance will not be taken, it is highly recommended.

All exams are cumulative but the emphasis is on the current material. **There will be no make-up exams.** Please make sure you have no scheduling conflict with the exam dates.

Academic Integrity:

Students are expected to do their own work on problem sets, quizzes and exams. It is important that you make sure you are familiar with the sections on “Academic Honesty” in the Undergraduate Catalog and act accordingly.

Schedule of Topics

I. Descriptive Statistics	Chapters 1-3
1. Graphical presentation of data and results for effective interpretation.	(1 lecture)
2. Measures of central tendency and dispersion and other methods of describing data, such as percentiles, quartiles, etc.	(2 lectures)
II. Probability and Distributions	Chapters 4-7
1. Computation of probability for simple and complex events	(3 lectures)
2. Discrete probability distribution (Binomial and Poisson distributions)	(4 lectures)
3. Continuous probability distribution (Uniform and Normal distributions)	(4 lectures)
4. Sampling distribution of sample means	(3 lectures)
III. Inferences based on estimation	Chapter 8
1. Large and small sample confidence interval estimation for means	(2 lectures)
2. Confidence interval estimation for proportions	(2 lectures)
3. Determination of confidence levels and sample size	(3 lectures)
IV. Inferences based on hypothesis testing	Chapter 9
1. Elements of hypothesis testing	(1 lecture)
2. Type I and II errors in hypothesis testing	(2 lectures)
3. Large and small sample tests of hypothesis for the population mean	(3 lectures)
4. Tests of hypotheses for population proportions	(3 lectures)
V. Regression	Chapter 12
1. Simple regression	(2 lectures)
2. Multiple regression	(1 lecture)
3. Testing hypothesis of regression coefficients	(2 lectures)