

BOSTON COLLEGE
DEPARTMENT OF ECONOMICS

EC 151.10
Introduction to Statistics
Fall 2000
T/Th 12-1:15

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Course Description:

This is an introductory course in statistics. The course is designed to help you learn how to analyze data using various statistical tools. Students with both intuitive understanding and technical ability in interpreting data will benefit from this course.

Text:

1. Anderson, Sweeney and Williams, Essentials of Statistics for Business
2. Pelosi and Sandifer, Doing Statistics for Business (optional)

Course Requirements:

Problem Sets (20%)
Quizzes (10%) TBA
Two Midterms (40%) on Oct 5 and Nov 9
One Final (30%) on Thursday Dec 14 at 9:00

Problem sets will cover questions from the main textbook. Some of the problem sets will include computer exercises. Students are encouraged to use computers to develop their skills in working with data. Excel is the program that students will use during this class.

A short quiz is given every three or four weeks. The exact dates will be announced a week in advance. There will be a total of 4 quizzes.

All exams are cumulative but the emphasis is on the current material. make-up exams. Please make sure you have no scheduling conflict with other classes.

Academic Integrity:

Students are expected to do their own work on problem sets, quizzes, and exams. You may consult your fellow students on problem sets but you are responsible for your own answer. It is important that you make sure you are familiar with the Academic Honesty policy in the Undergraduate Catalog and act accordingly.

Syllabus

Dates	Topics	Readings
Sept. 5	Introduction, Descriptive Statistics: Tables & Graphical	Ch. 1-2
Sept. 7	Measure of Location and Variability	Ch. 3.1-3.3
Sept. 14	Covariance, Correlation, and Weighted Mean	Ch. 3.4-3.6
Sept. 21	Probability: Permutations, Combinations	Ch. 4.1-2
Sept. 28	Probability: Basic Rules, Conditional Probability	Ch. 4.3-4.4
Sept. 30	Bayes Theorem	Ch. 4.5
Sept. 30	Random Variables, Discrete Probability, Expected Value, Variance	Ch. 5.1-5.3
Sept. 30	Binomial & Poisson Probability Distributions	Ch. 5.4-5.5
Oct. 3	Review Session	Ch. 1-5
Oct. 5	First Midterm	
Oct. 10	Uniform & Normal Probability Distributions	Ch. 6.1-6.2
Oct. 12	Approximation of Binomial, Exponential Distributions	Ch. 6.3-6.4
Oct. 17	Sampling, Point Estimation	Ch. 7.1-7.3
Oct. 19	Sampling Distributions	Ch. 7.4-7.5
Oct. 24	Interval Estimation: Large and Small Sample Cases	Ch. 8.1-8.2
Oct. 26	Determining the sample size Interval Estimation of a Proportion	Ch. 8.3-8.4
Oct. 31	Null and Alternative Hypotheses Type I and Type II Errors	Ch. 9.1-9.2
Nov. 2	One-tailed and Two-tailed Tests	Ch. 9.3-9.4
Nov. 7	Small Sample Test, Test about Population Proportion	Ch. 9.5-9.6
Nov. 9	Second Midterm	Ch. 6-9
Nov. 11	Simple Linear Regression, Least Squares Method	Ch. 12.1-12.2
Nov. 16	Coefficient of Determination, Model Assumptions	Ch. 12.3-12.4
Nov. 21	Testing for Significance, t Test, F Test	Ch. 12.5
Nov. 21	Using the Estimated Regression for Prediction	Ch. 12.6
Nov. 21	Multiple Regression	Ch. 12.9
Nov. 30	Time Series and Moving Average	Ch. 13 (optional)
Dec. 5	Forecasting	Ch. 13 (optional)
Dec. 7	Review Session	Ch. 1-12
Dec. 14	Final Exam	