

MIDDLESEX COUNTY COLLEGE  
EDISON, NEW JERSEY

MATHEMATICS DEPARTMENT

Date: August 12, 2008

Course Title: Introduction to Business Statistics

Course No. MAT 285

Class Hours: 4

Laboratory Hours: 0

Credit Hours: 4

Department Head Approval: \_\_\_\_\_  
Maria DeLucia, Ph.D.

Dean Approval: \_\_\_\_\_  
Reginald Luke, Ph.D.

**Prerequisite:** MAT 131

**Textbook of Course:**

**Author:** McClave, Benson, Sincich

**Title:** Statistics for Business and Economics, 10<sup>th</sup> ed.

**Publisher:** Pearson / Prentice Hall

**Catalog Course Description:**

An in-depth look at descriptive statistics, probability theory, sampling distributions, principles of hypothesis testing, confidence interval estimation, and regression. The material is designed to give students whose work requires data and statistical analyses the necessary knowledge and skills required for such work. The methods of this course are a good foundation for statistics as applied to business. This course will also provide a sound foundation for the study of more advanced topics.

**Goals:**

To acquaint the student with statistical problems; to develop an understanding of the role that statistics plays in making inferences based on observed data. To show how the basic concepts of statistics and inferential methods apply to the field of business.

General Objectives of Course:

The student will demonstrate through quizzes, examinations, homework, and projects the ability to:

1. understand the changing aspects of statistics to our technological society and its importance in our daily lives.
2. apply mathematical concepts to practical problems through problems and projects
3. become informed citizens who can and will be able to analyze data intelligently
4. organize and analyze data through lectures and discussions which will guide the students in the development of these skills
5. note the use and misuse of statistics throughout the course
6. gather information to assist in problem solving
7. identify the proper “algorithmic” methods needed for hypothesis testing and discuss the underlying theory behind why these methods work
8. use the computer as a problem solving tool in completing assignments requiring the use of technology

Course Outline

<u>Chapters</u>	<u>Topics</u>	<u>Approximate Number of Weeks</u>
1.1-1.3, 1.5-1.7 2.1-2.8, 2.11	Introduction, visual and numerical descriptions of univariate data	2
2.9, 10.1-10.2, 10.6	Visual and numerical descriptions of bivariate data	1
3	Basic probability	1.5
4.1-4.4	Discrete probability distributions	1.5
4.5-4.9	The normal distribution	1.5
4.10-4.11	Sampling distributions	1
5.1-5.5	Confidence interval estimates of the mean and proportion	1.5
6.1-6.6	Hypothesis tests for a single population mean or proportion	3
7.1-7.3	Two sample t-tests	<u>1</u>
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It is recommended that students be assigned a project that involves survey design, data collection, descriptive and inferential statistics – to be done in phases throughout the semester. For ideas and suggestions, please see the Mathematics Department.