WEBSTER UNIVERSITY

School of Business and Technology
Graduate Programs in Business, Computer Information, Human Resources, Health Services, and Management
Metro Campus
Columbia, South Carolina 29207
Phone: (803) 699-0900

BUSN 5760 **Business Statistics**

Instructor: Munir Hassan, M.B.A., Ph.D.
Phone: 803-535-5206
Email: mhassan@claflin.edu

Course Description

This course will allow students to examine the application of statistical analysis in business decision making. It will focus on the utilization of statistical methods as applied to business problems and operations. Included are descriptive statistics, probability, hypothesis testing, sampling, statistical inference and statistical quality control.

Incoming Competencies

This course provides a foundation for understanding statistical problem solving procedures. Therefore, no incoming competencies in statistics are required other than general mathematical capabilities acquired in undergraduate work. A basic knowledge of computers and Microsoft Excel will be helpful, but not mandatory. Students will be expected to exhibit professional verbal and written communication skills in class discussions and presentations.

Course Objectives

The purpose of this course is to provide students in the various fields of business administration with a sound introduction to the many applications of descriptive and inferential statistics. Students will develop the capability to interpret statistical information properly and bring various statistical tools to bear on a variety of problems.

Many students are uncomfortable with the topic of statistics. Accordingly, a significant amount of class time will be spent each session working through examples of the techniques under study. Homework assignments will be reviewed each week in class to facilitate learning. Practice reinforces knowledge. The goal of this course is to provide an understanding and a high degree of comfort with statistical applications.

Attendance

The course is designed as a hands-on experience; therefore, your attendance is highly encouraged. Class participation will be graded.

Course Grading

Your grade will be based on your homework, your class participation and your mid-term and final exams as follows:

Class Participation	10%
Homework	20%
Mid-term Exam	30%
Final Exam	40%

Make up exams are rarely given, and a request for a make-up must be submitted in writing prior to the day of the exam. Make-up exams are at the discretion of the instructor. They may be oral, written or both.

Please contact the instructor for an appointment if you are experiencing problems with the course.

Grade categories are:

A	100-96
A-	90-95
B+	89-87
B	86-84
B-	83-80
C	79-70
F	Below 70

Academic Honesty

Webster University strives to be a center of academic excellence. As part of our Statement of Ethics, the University strives to preserve academic honor and integrity by repudiating all forms of academic and intellectual dishonesty, including cheating, plagiarism and all other forms of academic dishonesty. Academic dishonesty is unacceptable and is subject to a disciplinary response. See page 29 of the Webster University 2003-2005 Graduate Catalog for a complete description. The university reserves the right to utilize electronic databases, such as Turnitin.com, to assist faculty and students with their academic work.

Note:

The instructor reserves the right to make adjustments to this syllabus if he feels such adjustments to be in the best interest of the class.

Course Materials

Text: Basic Statistics for Business & Economics, 5th *Edition, 2006*
Publisher: McGraw-Hill Publication. ISBN 0-07-312-1657
Author: Douglas A. Lind, William G. Marchal & Samuel A. Wathen

Other: Calculator with square root function, graph paper, straight edge. Access to a computer with Microsoft Excel will be helpful.

Tentative Schedule

Reading:	Lind, et al, Chapters 1-3
Topics:	Introduction, descriptive statistics, frequency distributions, data displays, measures of central tendency
Learning Objectives:	1. Define statistics 2. Determine levels of measurement 3. Compute mean, median, mode 4. Compute variance, standard deviation

Reading:	Lind, et al, Chapters 4-6
Topics:	Probability, conditional and joint probabilities, Bayes' theorem, discrete distributions, introduction to the normal distribution
Learning Objectives	1. Compute mean, variance, standard deviation of a probability distribution 2. Construct binomial and Poisson distribution 3. Compute z values

Reading:	Lind, et al, Chapter 6-8
Topics:	Normal distributions (continued), populations and samples, probability sampling, the Central Limit Theorem, confidence intervals, point and interval estimates, sample size
Learning Objectives:	1. Compute probability and non-probability samples 2. Compute standard error 3. Compute sample size 4. Determine levels of significance

Mid-term Exam distributed

Reading:	Lind, et al, Chapters 9-10
Topics:	One- and Two-Sample Hypothesis testing, null hypothesis, Type I and Type II error, Student's T, paired observations
Learning Objectives:	1. Compute one- and two-tailed tests of significance 2. Compute test statistic (z) to accept or reject hypothesis 3. Compute t and apply decision rules for single and paired observations

Mid-term collected

Reading:	Lind, et al, Chapter 11
Topics:	ANOVA, F distribution
Learning Objectives:	1. Compute F statistic 2. Compute ANOVA

Reading:	Lind, et al, Chapter 12
Topics:	Regression, correlation, coefficients of correlation and determination, least squares, standard error of estimate,
Learning Objectives:	1. Draw scatter diagram 2. Compute correlation coefficient 3. Compute determination coefficient 4. Compute regression equations 5. Compute standard error

Reading:	Lind, et al, Chapter 13
Topics:	Multiple regression, multiple correlation
Learning Objectives:	1. Compute multiple regression equation

Reading:	Lind, et al, Chapter 14
Topics:	Chi square, goodness-of-fit, contingency tables, nonparametrics
Learning Objectives:	1 Compute chi-square 2. Construct contingency tables.