

SAM HOUSTON STATE UNIVERSITY
COLLEGE OF BUSINESS ADMINISTRATION
Department of Economics and International Business
Course Syllabus - Fall 2007

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| COURSE NUMBER: | BAN 568 |
| COURSE TITLE: | TECHNIQUES OF STATISTICAL ANALYSIS. |
| PREREQUISITE | None |
| INSTRUCTOR: | John M. Miller, Ph.D., J.D. |
| OFFICE: | Smith-Hutson, 241-A |
| PHONE: | (936)294-1293 |
| E-MAIL: | eco_jmm@shsu.edu |
| OFFICE HOURS: | Wednesday – 5:00 – 6:00 p.m. |
| REQUIRED TEXT | Bowerman & O’Connell, <i>Business Statistics in Practice - Fourth Edition</i> |

Calculator - make and model optional, but more than addition and subtraction.

DESCRIPTION OF COURSE

An integration of the concepts and application of some of the widely used statistical and quantitative techniques for decision making. Topics include statistical inference, ANOVA, correlation, simple linear regression, multiple regression, questionnaire construction and analysis.

COURSE OBJECTIVES

The major objectives of this course are for the student to learn to:

1. Use statistics as a business tool in the face of incomplete knowledge and uncertainty. Emphasis will be placed on how information from a sample may be used to describe a population or to make inferences about a population.

2. Collect various types of numerical data, how to organize a data set into a concise and usable form, and how to use statistics to describe the critical dimensions of that sample.
3. Use estimation and hypothesis testing to make inferences about means, and proportions. The concepts will be introduced using the traditional one-sample techniques.
4. Use a wide range of powerful statistical procedures which are designed to analyze both qualitative and quantitative data.
5. Use the concepts and fundamentals of mathematical techniques as applied to common business situations.

COURSE EVALUATION PROCESS

Homework/Quizzes/Laboratories

Homework will be assigned on a regular basis, but will not be handed in - instead you will be expected to lead the class for a homework problem or two during the semester. The student is encouraged to work through all the examples in the text and other exercises as well. It is the nature of this beast that practice is the best way to gain understanding.

Special Writing Project

There will be one paper assigned toward the end of the semester. You will be asked to comment in some detail on a statistical analysis done by someone else. More information on this will be available later.

Exams

There will be three major exams given during the course. The exams will be take home, and due five days after being handed out.

Final

The final will be comprehensive and take home.

Evaluations

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| Labs | 12% |
| Special writing project | 8% |
| Exam I | 20% |
| Exam II | 20% |
| Exam III | 20% |
| Final | 20% |

The course grade will be based on the following grading scale:

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| A | 90 - 100% |
| B | 80 - 89% |
| C | 70 - 79% |
| D | 60-69% |
| F | below 60% |

Student Syllabus Guidelines: You may find online a more detailed description of the following policies. These guidelines will also provide you with a link to the specific university policy or procedure:

<http://www.shsu.edu/syllabus/>

Academic Dishonesty: Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. *See Student Syllabus Guidelines.*

Classroom Rules of Conduct: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Students may tape record lectures provided they do not disturb other students in the process.

Student Absences on Religious Holy Days: Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work. *See Student Syllabus Guidelines.*

Students with Disabilities Policy: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should visit with the Office of Services for Students with Disabilities located in the Counseling Center. *See Student Syllabus Guidelines.*

Visitors in the Classroom: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

CLASS ATTENDANCE: Class attendance is required. Roll will be taken during each class period. Students are responsible for materials covered during class periods that may not be in the text. Students missing classes may miss important announcements, homework assignments, quizzes, labs, and handouts.

IMPORTANT DATES

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| Last day to change class schedule | Monday, August 27 |
| Last day to drop without an "F" | Wednesday, October 2 |
| Last day for resignations | Friday, December 6 |
| Final exam | Wednesday, December 12 |

TENTATIVE OUTLINE

| Chapter | Material | Time - Days |
|---------|---|-------------|
| 1 | Introduction - Data types | 1/2 |
| 2 | Descriptive Statistics Central Tendency, Variability and Shape | 1 |
| 3 | Probability Theory - Kolmogorov and the Laws | 1/2 |
| 4 | Discrete Random Variables - Binomial and Poisson | 1/2 |
| 5 | Continuous Random Variables - Normal and Exponential | 1/2 |
| 6 | Sampling Distributions - the Central Limit Theorem | 1/2 |
| 7 | Confidence Intervals and Point Estimates | 1/2 |
| 8 | Hypothesis Testing | 1/2 |
| 9 | Statistical Inferences - Two Samples | 1/2 |
| 10 | Experimental Design and Analysis of Variance | 2 |
| 11 | Linear Regression | 2 |
| 12 | Multiple Regression | 2 |
| 14 | Time Series Forecasting | 1 |
| 15 | Non-parametric Methods | 1 |
| 16 | Chi-Square Tests | 1 |