

Course Syllabus  
Summer I 2008

<b>Course Number:</b>	BAN 232.02, M–F 10:00 – 11:50 p.m., Rm SHB 135	
<b>Course Title:</b>	Business Analysis	
<b>Prerequisites:</b>	MTH 199	
<b>Instructor:</b>	Dr. Berg	<b>Office:</b> 237G – SHB
<b>Office Hours:</b>	1:00 – 2:30 p.m. M–Th and by appointment	<b>Phone:</b> (936)294 - 1243 (Office) <b>E-Mail:</b> eco_mdb@shsu.edu

## 1 Required Materials

We will be using the textbooks entitled *Statistics, The Art and Science of Learning from Data* ISBN 0-13-008369-0, published by Pearson/Prentice Hall and *Calculus For Business, Economics, Life Sciences, and Social Sciences*, Tenth Edition, ISBN 0-13-143261-3, published by Pearson/Prentice Hall. Since we will only require certain chapters from the calculus book, the publisher has agreed to offer a custom edition of the book at a reduced price (ISBN 0-536-26506-2). Look for it at the local book stores.

EVERY STUDENT IS EXPECTED TO HAVE A CALCULATOR WHICH CAN HANDLE EXPONENTS, NATURAL LOGARITHMS AND FACTORIALS. CALCULATORS SHOULD BE BROUGHT TO EVERY CLASS MEETING. CALCULATORS CAN NOT BE SHARED DURING EXAMS. CALCULATORS BUILT INTO CELL PHONES AND PDA'S ARE UNACCEPTABLE.

## 2 Supplemental Texts

A fun book which is highly recommended is *The Cartoon Guide To Statistics* by Larry Gonick & Woolcott Smith. Another good book is, *Statistics for People Who (Think They) Hate Statistics*, 2nd edition, by Neil J. Salkind.

## 3 Student Conduct and Discipline

Each student is expected to be fully acquainted and comply with all published policies, rules, and regulations of SHSU, copies of which shall be available to each student for review online and/or at various locations on campus. Students are also expected to comply with all federal and state laws.

### 3.1 Academic Honesty

SHSU expects all students to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. SHSU may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials.

### 3.2 Cell Phone Policy

Do not let your cell phone ring during class! Do not answer your cell phone during class! Do not use instant messaging during class! If this is unacceptable do not come to class.

### 3.3 Movements Into and Out of Class

Students should not come and go from the classroom during the lecture. This interrupts the flow of class material, distracting both the students and the professor. Please be courteous by arriving to class on time and refrain from leaving the room until the class is dismissed.

### 3.4 Food and Drink in the Classroom

The Dean has explicitly requested that we enforce the prohibition of food and drink in the classrooms. Please do not bring food or drink into class.

## 4 Course Objectives

The purpose of this course is to expose the student to the use of descriptive and inferential statistics, as well as basic derivative calculus and applied mathematics. Topics include: organizing and presenting data, descriptive measures, probability, discrete and continuous distributions, sampling distributions and basic inference. Linear, quadratic, polynomials, exponential and logarithmic functions will be used for modeling various problems encountered in business. The concepts of derivatives will also be introduced as a tool to determine rates of change and solve for optimal values.

## 5 Course Evaluation Process

<b>Best three mid-term exam scores</b> (there will be 4 mid-term exams, each exam is potentially worth 100 points)	300pts
<b>Final Exam</b>	100pts
Total available points <sup>a</sup>	<hr/> 400 pts
<sup>a</sup> All exams are mandatory. However, I will drop the lowest mid-term exam score. <b>The final exam grade can not be dropped.</b>	

Although the book homework assignments will not be collected, exam problems will strongly resemble the homework problems. It is in each student's best interest to completely understand the homework problems.

There will be 4 mid-term exams plus the final. Exams will consist of multiple choice questions and problems similar to the assigned homework. The exams will be closed book, however students will be allowed the use of a calculator. Students will be given the entire class period to complete the exam. Each student may drop the single lowest exam score. Since your lowest examination score will not be used in computing your course grade, **there will be no makeup exams** – a missed exam will be scored as a zero.

Students should understand this policy clearly. There are no make-up exams for whatever reason. If you miss the exam for a court date, illness, doctor's appointment, car accident, death in the family, or any other reason, that exam will be scored as a zero. I will drop the single lowest mid-term exam from the grade calculation.

If you know ahead of time that you will not be able to take a mid-term exam at the scheduled time, come to me and discuss the conflict. I may or may not be able to arrange a time for you to take the exam early. However, under no circumstances will I allow you to take an exam after the scheduled time.

Exam scores will be posted on BlackBoard, but your grade for the course will only be available on SamInfo.

The final exam will be comprehensive. **All students must take the final exam.** There are no make-up final exams. Students must take the final exam at the officially scheduled time.

Letter grades will be assigned as follows:

% of Total Available Points Earned by Student	Grade Assigned
90% +	A
80 – 89 %	B
70 – 79 %	C
60 – 69 %	D
0 – 59 %	F

**Example Grade Calculation:**

Let’s assume that John Doe has the following mid-term exam grades: 85,80,75,50, and a 90 on the final exam. To calculate John’s grade we first drop the lowest exam score (the 50) and add the points together:  $85 + 80 + 75 + 90 = 330$  John earned 330 points out of a potential of 400 points. The percentage of points earned is  $\frac{330}{400} \times 100 = 82.5\%$  John would receive a **B** for the course grade.

**5.1 Exam Dates**

<b>Exam #1</b> .....	Friday, June 6
<b>Exam #2</b> .....	Friday, June 13
<b>Exam #3</b> .....	Friday, June 20
<b>Exam #4</b> .....	Friday, June 27
<b>Final Exam</b> .....	Tuesday, July 1, 8:00 – 10:00

Bring to every class and especially to each exam:(1) a no. 2 pencil (2) your calculator. You will need at least 5 scantrons for the semester.

**6 Attendance**

Attendance will be recorded for each class meeting. According to university policy “Regular and punctual class attendance is expected of each student at Sam Houston State University.” (See your undergraduate catalog.) Starting with the second class meeting, attendance will be taken.

**IMPORTANT:** While the student is in class he/she is expected to be awake and paying attention. Students should not study for another class while in my class. Students not willing or not able to pay attention and participate in the class discussion should not be in class.

**7 Student Absences on Religious Holy Days**

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student who is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

“Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, United States Tax Code.

**8 Disabled Student Policy**

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department

chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.

If you have a disability that may adversely affect your work in this class, then I encourage you to register with the SHSU Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the Counseling Center.

## 9 Tips for Success

Over the years I have collected a list of study habits followed by the most successful students.

1. Read the assigned chapter before coming to class.
2. Pay attention to the lecture. Concentrate on staying tuned into the class discussion.
3. Ask questions when you don't understand.
4. Review lecture notes as soon as possible after the lecture.
5. **Work as many sample problems as possible.**
6. Review class notes and worked problems on a regular basis.
7. Create a study schedule and stick to it. Even when there is nothing new to study, stick to your schedule and review old material.
8. Read the chapter as many times as it takes for you to understand and remember it. (once lightly – once for understanding – once for review)
9. Discuss the material with other students. Try to help others who are having difficulty understanding.
10. Don't fall behind. Don't wait until the last minute. Do it now!

## 10 Course Outline

Date	Lesson	Topic
Tuesday, June 03, 2008	1	Proportions, Percentage Change, Exponents
Wednesday, June 04, 2008	2, 3	Sigma Notation, Index Numbers & Linear Functions
Thursday, June 05, 2008	4, 5	Exponential Functions & Logarithms
Friday, June 06, 2008	Exam # 1	
Monday, June 09, 2008	6	Average Rates of Change, Instantaneous Rates of Change
Tuesday, June 10, 2008	7	Derivative of a Constant, Power Rule, Sums & Differences
Wednesday, June 11, 2008	8, 9	Product Rule, Quotient Rule, & Chain Rule
Thursday, June 12, 2008	10, 11	Marginal Analysis, & Interpreting the First and Second Derivative
Friday, June 13, 2008	Exam # 2	
Monday, June 16, 2008	12, 13	Derivatives of Exponential & of Logarithmic Functions
Tuesday, June 17, 2008	14, 15	Descriptive Statistics & Measures of Central Tendency
Wednesday, June 18, 2008	16, 17	Measures of Variability & Probability
Thursday, June 19, 2008	18, 19	Probability
Friday, June 20, 2008	Exam # 3	
Monday, June 23, 2008	20	Discrete Probability Distributions
Tuesday, June 24, 2008	21	Continuous Probability Distributions
Wednesday, June 25, 2008	22	Binomial Probability Distributions
Thursday, June 26, 2008	23, 24	Sampling Distributions & Central Limit Theorem
Friday, June 27, 2008	Exam # 4	
Monday, June 30, 2008	Review	
Tuesday, July 01, 2008	Final Exam	

# 11 Assignments

Lesson	Book & Chapter.Section	Lesson Topic	Problems
1	Handouts	Proportions/Percentage Change/Exponents	Handout
2	Handouts	Sigma Notation/Index Numbers	Handout
3	Calc <sup>a</sup> 1.1	Functions	(p. 17) odd 1-11, odd 19-67, 79, 81
3	Calc 1.2	Elementary Functions	(p. 32) 1, 3, 5, 7, 9, 11, 13, 15, 17, 21, 61, 63
3	Calc 1.3	Linear Functions	(p. 49) 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 59, 61, 62, 63
4	Calc 1.4	Quadratic Functions	(p. 64) 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 25, 27, 53, 55, 57, 59
5	Calc 2.2	Exponential Functions	(p. 106) 1, 3, 5, 7, 9, 11, 15, 17, 19, 61, 63, 65, 67, 69, 71
5	Calc 2.3	Logarithms	(p. 119) 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 31, 33, 35, 37, 39, 93, 95, 97
6	Calc 2.3	Average Rates of Change	(p. 173) 1, 3, 5, 7, 11, 13, 17, 59
7	Calc 3.4	Instantaneous Rate of Change: The Derivative	(p. 183) odd number problems 1-55, 81, 83
8	Calc 3.5	Product Rule & Quotient Rule	(p. 192) odd numbered problems 1-59, 65, 67
9	Calc 3.6	Chain Rule	(p. 200) odd numbered problems 1-79
10	Calc 3.7	Marginal Analysis	(p. 210) 1, 3, 5, 7, 9, 11, 13, 15
11	Calc 4.1	Graphs and First Derivatives	(p. 238) odd problems 1-31
11	Calc 4.2	Second Derivatives and Graphs	(p. 254) odd problems 1-23
12	Calc 4.5	Optimization Problems	(p. 293) odd problems 1-31
12	Calc 5.1, 5.2	Derivative of Exponential Functions	(p. 311) 1, 3, 5, 7, 9, 17, 19, 21, 23, 25 ; (p. 322) odd problems 1-33, 57, 59, 61
13	Calc 5.3	Derivative of Logarithmic Functions	(p. 333) odd problems 1-37, 69, 71
14	Stat <sup>b</sup> 1.1, 1.2, 1.3	Introduction to Statistics	(p. 29) odd numbered problems 2.1-2.7
14	Stat 2.1	Types of Data	(p. 44) 2.11, 2.13, 2.15, 2.17, 2.19, 2.25
14	Stat 2.2	Descriptive Statistics, Histograms	(p. 55) 2.29, 2.31, 2.33, 2.35
15	Stat 2.3	Measures of Central Tendency	(p. 63) 2.43, 2.45, 2.47, 2.49
16	Stat 2.4	Measures of Variability	(p. 72) 2.57, 2.59, 2.63, 2.65, 2.71
17	Stat 2.5	Percentiles, etc.	(p. 200) 5.1, 5.3
18	Stat 5.1	Probability	(p. 212) 5.13, 5.15, 5.17, 5.23
18	Stat 5.2	Probability	(p. 223) 5.27, 5.29, 5.31, 5.35
19	Stat 5.3	Probability	(p. 255) 6.1, 6.3, 6.5, 6.7, 6.9
20	Stat 6.1	Discrete Probability Distributions	(p. 267) 6.13, 6.15, 6.17, 6.19, 6.23
21	Stat 6.2	Normal Distribution	(p. 276) 6.29, 6.33, 6.35, 6.37
22	Stat 6.3	Binomial Distribution	(p. 286) 6.43, 6.45, 6.47, 6.49, 6.51
23	Stat 6.4	Sampling Distributions, Hypothesis Testing	(p. 296) 6.53, 6.55, 6.57, 6.59
24	Stat 6.5	Sample Means and Population Means	(p. 303) 6.61, 6.63, 6.65
24	Stat 6.6	Inferences About a Population	

<sup>a</sup>*Calculus*, by Barnett, Ziegler, Byleen

<sup>b</sup>*Statistics*, by Agresti & Franklin