Sam Houston State University
College of Business Administration
Department of Economics and International Business

Course Syllabus
Spring 2018

Course Number:	BANA 2372 online	**Course Title:**	Business Analysis
Prerequisites:	MATH 1324/1420/1314	**Instructor:**	Dr. Berg
Office Hours:	MW 2:00-3:30, TH 3:30-5:00	**Office:**	SHB 237K
Office Phone:	(936)294-1243	**E-Mail:**	`dberg@shsu.edu`

1 Course Description

This course is an introduction to the use of quantitative business techniques. Topics include: differential calculus, organizing and presenting data, descriptive statistics, probability, discrete and continuous distributions, modeling, optimization procedures, and statistical inference. Prerequisite: MATH 1324/1420/1314. Credit 3.

2 Learning Outcomes

After completing this course the student should be capable of the following:

1. Apply the rules and concepts of derivative calculus to various functional forms.
2. Understand the difference between descriptive and inferential statistics.
3. Determine measures of central tendency: mean, median, and mode.
4. Determine and interpret various measures of variability.
5. Apply descriptive techniques to a data set.
6. Understand the concept of sampling.
7. Understand the use of sample statistics to estimate population parameters.
8. Apply the basic rules of probability.
9. Understand and apply the concept of discrete probability.
10. Understand and apply the binomial probability model.
11. Understand and apply the uniform and normal probability distributions.
12. Understand and apply the concept of sampling distributions

3 Required Materials

We will be using the textbook entitled Modern Business Statistics with Calculus: An Applied Approach by Anderson, Sweeney, Williams, Camm, Cochran, Larson, Hodgkins, published by Cengage Learning. This textbook is primarily an eBook incorporated into the SHSU Blackboard learning management system. You can purchase access to the book and its materials through Blackboard by clicking on the *Purchase Course Materials* link in the left hand column of the Blackboard page for this course. The eBook is required because all of the homework assignments are online.

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.

- The mid-term exams and the final exam will require you to use the free proctoring software furnished by SHSU Online. ProctorFree is an on-demand, automated online proctoring service that deters cheating in an online testing environment. Using biometric and machine learning technologies, ProctorFree has eliminated the need for a human proctor during testing.
- You will be required to have a microphone, keyboard, mouse, and webcam (normally, an external webcam includes a microphone). You will also need the Java plugin for your Browser, which can be Firefox 13+, Chrome 18+, Sarari 6+ (Mac only), or Internet Explorer 8+ (Windows only).
- For more information refer to the ProctorFree information link on the landing page in Blackboard. There is nothing else to download or install.
- Procedures and a practice exam will be furnished in the course as well as support from SHSU Online Technology Support at 936-294-2780.

4 Supplemental Texts

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

5 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.

5.1 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.(See http://www.shsu.edu/syllabus/)

All of the exams are closed book/closed notes. Use of outside materials during an exam is considered cheating. Use of a cellphone during an exam is considered cheating. No formula sheets are permitted during an exam. On the fourth exam and the Final Exam you will be permitted to use the standard normal probability tables (print them before the exam and show them to the webcam prior to taking the exam). Scratch paper is allowed on exams but you must show the paper to the webcam before and after use.

Only exams submitted through the ProctorFree system will be used to compute your course grade. If an exam is submitted outside of the ProctorFree system, that exam will be given a score of zero.

5.2 Other University Policies

For policies concerning student disabilities,and student absences on religious holy days, see the university web page http://www.shsu.edu/syallbus/ .

6 The Weekly Process

Each week another unit will be available to you online. After going through the online material, read the corresponding sections in the book. Homework problems are assigned. You need to do the homework!

Exams are timed. Be prepared to work the problems just as if you were in a face-to-face class. The nice thing about an online class is that you can choose when to take the exam. That means you can prepare yourself first. You won't have enough time to look up things in your book (which you should not be doing anyway during an exam).

All exams should be considered comprehensive. This means that older material may appear on the current exam. The knowledge you learn in a previous part of the course may be required to understand newer material.

7 How Your Course Grade Will Be Determined

There are a total of 500 points available to be earned in the course. Exams are worth 100 points each. There will be four exams (including the final exam). Therefore, 400 points of the course total will come from the exams. The remaining 100 points will come from graded online assignments and activities.

Your homework score will be computed as follows:

$$\left(\frac{Sum\ of\ homework\ points\ earned}{Sum\ of\ homework\ points\ available}\right) \times 100 = Homework\ grade$$

For example, if there are 350 homework points available and you earn 270 of them, your homework grade score would be 77.1.

The course is divided into three parts corresponding to the three mid-term exams. All part one homework must be completed prior to the part one exam deadline. All part two homework must be completed prior to the part two exam deadline. All part three homework must be completed prior to the part three exam deadline. Homework completed after the corresponding exam will not be given credit.

If your final exam score is higher than your lowest mid-term exam score, I will replace the lowest mid-term exam score with the final exam score. In this case your final exam score will be counted twice, once as the final exam and once in the place of the lowest mid-term score. The final exam is mandatory and it cannot be dropped. If you miss an exam you will receive a zero for that exam. **There are no make-up exams.**

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 by the officially scheduled due date and time.

To receive an A in the course you must earn 90% or more of the 500 points. If you earn from 80% to 89.45% of the points you will receive a B. If you earn from 70% to 79.45% of the points you will receive a C. If you earn between 60% and 69.45% you will receive a D. If you earn anything below 59.45% of the total points you will receive an F.

Online Homework Assignments	100pts
Three mid-term exam scores (there will be 3 mid-term exams, each exam is potentially worth 100 points)	300pts
Final Exam	100pts
Total available points*	500 pts

* All exams are mandatory. However, I will replace the lowest mid-term exam score with the final exam score. The final exam counts twice, once as a replacement for your lowest mid-term and once as the final exam. The final exam grade can not be dropped.

Letter grades will be assigned as follows:

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

Example Grade Calculation:
Lets assume that John Doe has earned 92% of the available homework points, therefore his homework grade is 92. John has the following mid-term exam grades: 85, 80, 50, and a 90 on the final exam. To calculate Johns grade we first replace the lowest exam score (the 50) with the final exam score (the 90) and add the points together: 92 + 85 + 80 + 90 + 90 = 437 John earned 437 points out of a potential of 500 points. The percentage of points earned is $\left(\frac{437}{500}\right) \times 100 = 87.4\%$. John would receive a **B** for the course grade.

7.1 Exam Dates

Exam	First Date Available 5:00 a.m.	Deadline for Completion by 11:59 p.m.	Primary Weeks Covered on the Exam
1	February 19	February 25	1,2, 3, 4, 5
2	April 2	April 8	7, 8, 9, 10, plus old material
3	April 30	May 6	12, 13, 14, 15 plus old material
Final	May 7	May 9	entire course

8 Important Dates

Spring Break, March 12-16
Last Day for Q-drop, April 6
Final Exam, Start:May 7 End: May 9

9 Class Schedule

	Start Date 5:00 a.m.	End Date 11:59 p.m.	Activity
Week 1	01-17-18	01-21-18	Review percentages & percentage change; Review common functional forms
Week 2	01-22-18	01-28-18	Exponential & Logarithmic Functions
Week 3	01-29-18	02-04-18	Rates of Change and Derivatives
Week 4	02-05-18	02-11-18	Rules for Taking Derivatives
Week 5	02-12-18	02-18-18	Applications of the Derivative
Week 6	02-19-18	02-25-18	**Exam 1**
Week 7	02-26-18	03-04-18	Data, Statistics, Descriptive Statistics
Week 8	03-05-18	03-11-18	Descriptive Measures
	03-12-18	03-18-18	Spring Break
Week 9	03-19-18	03-25-18	Measures of Association
Week 10	03-26-18	04-01-18	Probability
Week 11	04-02-18	04-08-18	**Exam 2**
Week 12	04-09-18	04-15-18	Discrete Probability Distributions
Week 13	04-16-18	04-22-18	Binomial & Poisson Distributions
Week 14	04-23-18	04-29-18	Continuous Probability Distributions
Week 15	04-30-18	05-06-18	Sampling Distributions & **Exam 3**
Finals	May 7	May 9	**Final Exam**