Dillard College of Business Administration

Syllabus: Advanced Applied Business Statistics
BUAD 5603, Section 270
Wed   0530pm   0650pm   DB   175
Spring 2020

CONTACT INFORMATION:

Instructor:	Dr. John E. Martinez
Office Building:	Dillard College, Second Floor, Room 255
Office Phone:	(940) 397-4722
E-mail:	john.martinez@msutexas.edu
Office Hours:	9:30 am to 10:45 am Monday through Thursday, or by appointment.

COURSE MATERIALS:

Required Text: Anderson, Sweeney, and Williams: Statistics for Business and Economics, 5e 2009, Thomson South-Western

ISBN 13: 978-0-324-65421-9
ISBN 10: 0-324-65422-7

This text is designed to help students fully understand descriptive and inferential statistical analysis, its components, and its uses. Taking into consideration current statistical technology, its focuses on the use and interpretation of software, while also demonstrating the logic, reasoning, and calculations that lie behind any statistical analysis. Furthermore, the test emphasizes the application of statistical tools to real-life business concerns. This multi-layered, yet pragmatic approach fully equips students to derive the benefit and meaning of a regression analysis.

Course Description
Computerized statistical analysis. Inferential statistics, estimation, and testing hypotheses with emphasis on regression analysis.

Course Pre-requisites
BUAD 3033 (Business and Economics Statistics) or equivalent and consent of Graduate Coordinator.

Learning Goals

A. General Learning Goals (GLC):
- The general objective of this course is to review and solidify the knowledge gained in undergraduate statistics course and enhance the ability to use statistical analysis in decision-making process.
- Problem solving and decision making abilities through critical analysis, evaluation and interpretation of business information. Problem solving skills and interpretation of results will be assessed through homework problems and exams.
- Ability to use statistical Software (such as EXCEL and MINITAB).
- Ability to comprehend statistical discussions and comment on them.

General Learning Goals (GLC) associated with Assessment of Learning (AOL)

GLG3: Our students will produce creative responses to business situations.
> Objective: Our graduates will demonstrate the capability to critically analyze business situations and develop creative solutions to opportunities and problems.

GLG4: Our students will integrate knowledge across business disciplines.
> Objective: Our graduates will demonstrate the capability to integrate knowledge across business disciplines.

GLG5: Our students will communicate at a professional level.
Objective: Our graduates will be able to communicate in a professional business manner.

B. Course Specific Learning Goals:
- Summarize data using descriptive statistics.
- Understand the appropriate methodology for computing all statistical measures covered in this course.
- Apply basic statistical measure to the solution of structured business problems and interpret results.
- Understand the Ordinary Least Squares model and its applications.
- Apply hypothesis testing to business problems and estimates of coefficients.

COURSE POLICIES:

A. Attendance Policy:
Students are expected to attend all class meetings for this course, following the university attendance policy**. (**See the Midwestern State University Undergraduate Catalog. Each meeting of the class will run as scheduled. Do not disturb the class by walking in and out of the classroom during the class hour except for an emergency. Notwithstanding anything herein contained to the contrary, any student who has more than *three (3) unexcused absences* will receive a final grade of F. Class periods following an exam are important. If you are absent on a class period immediately following an exam, you will waive the right to have your test grade improved. Many important announcements are provided in class. You should always contact one of your classmates when you are absent.

B. Other Related Policies
Electronic Communication Devices
Use of electronic communication devices is discouraged during class sessions and students are encouraged to disable these instruments while attending class. Individuals holding devices that disrupt class may be asked to leave the class for the remainder of the session. Electronic communication devices are not permitted during examinations. If you plan to use a calculator during exams, you must have one that is independent of communication devices.

Expectation
Answers you provide in exams and case studies are expected to reflect logical reasoning, to be well articulated, including correct grammar and punctuation and to be clearly legible, in a manner and format that would be acceptable for a business report in a commercial setting. Students are expected to have a base knowledge in using EXCEL. Each student is expected to become sufficiently familiar with the Desire-2-Learn (D2L), as it will be a primary communication instrument for this class.

GRADING and EVALUATIONS:

A student's grade will be based on a weighted average of the following:
Exam I	15%
Exam II	15%
Final Exam	25%
Managerial Cases	45%
Case Set I – Written Presentation	15%
Case Set II – Written Presentation	15%
Designated Case - Oral Presentation	15%

Major exams:
Two major exams and a Final Exam are scheduled. Each exam will involve calculation and derivation of answers as well as their interpretation and meaning. Questions will come from the text and notes. A significant portion of each exam involves extensive use of EXCEL and MINITAB. Failure to take an exam on the scheduled date without prior permission from the instructor will result in a zero for that exam. Failure to take any exam without prior approval will result either in an 'F' or 'I' (incomplete) for the course. If, because of a truly unavoidable situation, you are absolutely not able to take an exam at the scheduled time/date, it is your responsibility to contact your instructor well in advance to ask to take the exam early. If a real, legitimate, last minute emergency occurs, it is your responsibility to contact me before the exam begins.

Final exam:
No comprehensive final exam. The final exam will only cover material since the last exam.

Managerial Cases – Written Assignments:
Two sets of Managerial Cases are required. Designated cases with specific formatting guidelines are attached at the end of this syllabus.

Managerial Cases – Oral Presentation:
Oral presentations of one of your managerial cases is required for this assignment. Further instructions will be provided in class. Students will have a specified times to complete each case assignment.

Class Participation:
Students are expected to participate in all class discussions. Participation includes more than attendance. It also requires punctuality and attentiveness, as well as asking and answering questions.

Campus Carry:
Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at Campus Carry Polices Link.

Academic Integrity:
With regard to academic honesty, students are referred to the "Student Honor Creed" of Midwestern State University Undergraduate Catalog, which may be found using the following MSU link: Link to Student Honor Creed.

Americans with Disabilities Act:
This class follows the guidelines suggested by the Center for Counseling and Disabilities Services for those students who qualify for disability services. See Midwestern State University Undergraduate Catalog which may be found at: Link to Suggested Guidelines Center for Counseling and Disabilities Services.

D2L:
The Midwestern State University D2L program will be incorporated into this class and will provide the primary default means of communication. Each student is expected to master the use of D2L. Assistance to achieve comfort using this program will be available as needed. Grades will be posted using D2L.

Syllabus Change Policy:
This syllabus is a guide for the course and is subject to change. All changes will be announced in class and posted on D2L and students will be responsible for incorporating the changes into the syllabus.

OTHER RELEVANT INFORMATION:
Midwestern State University Student Handbook:
See the most recent MSU Student Handbook for a statement of the university's policy on academic dishonesty. Any other questions not specifically addressed by this syllabus are governed by the student handbook.

Medical or Other Serious Problems:
Please take time and make the effort to advise me if you have difficulties that require my attention to properly evaluate your classroom participation and activities.

Tape Recordings and Cell Phones:
Tape recording of lectures is permitted. You may not tape record any information or class discussion when a graded test is being reviewed. Cell phones and pagers are prohibited unless the instructor has granted permission to have them in class.

Return of Exams:
Never take an exam or graded answer sheet out of the classroom. This will result in an automatic zero (0) on the exam.

Plagiarism Statement:
"By enrolling in this course, the student expressly grants MSU a "limited right" in all intellectual property created by the student for the purpose of this course. The "limited right" shall include but shall not be limited to the right to reproduce the student's work product in order to verify originality and authenticity, and educational purposes."

Lower Grades:

The instructor reserves the right to lower any student's final grade by a letter grade for:
(A)   A negative, rude, unreasonably argumentative or inattentive attitude in class, or,
(B)   Repeatedly disrupting the class for any reason (tardiness), or,
(C)   **NOT** showing respect for fellow classmates' questions, opinions, or class presentations, or,
(D)   Excessive absences – more than 3 - (see Attendance Policy above)

Correspondence

All correspondence regarding grades or class issues must be conducted through email using your **Midwestern State University (MSU) email only**. I will not return answers to questions to other email accounts and will not discuss grades or class standing over the phone. Since email is often the most convenient means of communication, it is recommended that students use and regularly monitor their MSU email account. The subject line of e-mails sent to me in relation to this class MUST be the following: **BUAD 5603 Advanced Applied Business Statistics.**

Netiquette: Communication Courtesy Code
Students are expected to follow rules of common courtesy in all email messages, class discussions, lecture hall posts, chats, etc. If I consider any of them to be

inappropriate or offensive, I will forward the message to the Chair of the department and the online administrators and appropriate action will be taken.

Deadlines

Do not wait for the last minute to do your homework. Check D2L for all assignments and the deadlines. Reply and check for replies on every email sent and received. The student is responsible for getting the work to me on time.

Other Requirements:

Each student should have a calculator capable of calculating standard deviations. Each student is expected to be familiar with the calculator's functions. Each student should have a thumb drive (USB) on which to keep various data sets and assignments that will be a part of each class. Projects and other selected assignments may include the requirement that electronic versions of your work be submitted. Maintaining these items on an accessible storage device will reduce stress that may otherwise develop with respect to submissions.

Course Schedule

Class	Date	Chapter and Topic
1	Jan 22	Presentation of Class Expectations and Requirements
2	Jan 29	1. Data and Statistics. 2. Descriptive Statistics: Tabular and Graphical Methods. 3. Descriptive Statistics: Numerical Methods.
3	Feb 05	4. Introduction to Probability. 5. Discrete Probability Distributions.
4	Feb 12	6. Continuous Probability Distributions. 7. Sampling and Sampling Distributions. 8. Interval Estimation.
5	Feb 19	Review for Exam I
6	Feb 26	**Exam I**
7	Mar 04	9. Hypothesis Tests. 10. Comparisons Involving Means. 11. Proportions and a Test of Independence.
8	Mar 11	Oral Presentations of Managerial Cases
9	Mar 18	Spring Break
10	Mar 25	Oral Presentations of Managerial Cases
11	Apr 01	Case Assignment I Due and **Exam II**
12	Apr 08	12. Simple Linear Regression.
13	Apr 15	12. Simple Linear Regression.
14	Apr 22	13. Multiple Regression.
15	Apr 29	Oral Presentations of Managerial Cases
16	May 06	Oral Presentations of Managerial Cases
17	May 13	Case Assignment II Due and **Final Exam**

Format for Managerial Case Writing Assignments

- Each student is responsible for completing two sets of designated Managerial Case Reports (see list below).
- Use Microsoft's WORD processor, with EXCEL inserts, to complete this assignment.
- The first case set is due at class time on Wed., Apr 1.
- The second case set is due at class time on Wed., May 13.
- The answer for each case question should be based on the information provided in the case itself. Be sure to adhere to all the guidelines and questions (boldly numbered) stated in each case.
- Consult the two following articles for clarification about writing proper statistics reports:
  Teaching Students to Write About Statistics by Mike Forster
  An Approach to Report Writing in Statistics Courses by Glenda Francis
- Use one-inch margins throughout and either 10 or 12 character font.
- This assignment is graded on the basis of accuracy, relevancy, neatness, style, thoroughness, and punctuality.
- Significant penalties are assessed for late work.
- Bind your work together by stapling, do not dog-ear.
- Missing even one case question will entail severe penalties.
- A **SINGLE** cover page with the following information should be provided for each case set:

  First and Last Name
  BUAD 3033 – Managerial Case Reports - Set I (or II)
  Semester, Year

- Do not write on back.
- Begin each specific case on a separate sheet with the Case title (i.e., Pelican Stores, Consumer Research, etc.) at the top of page.
- The following cases can be found in your text:

Format for Managerial Case presentations
- Each student is responsible for an oral presentation of their case results.
- Presentations should be between 10 and 15 minutes.
- Presentations should focus on the specific questions addressed in each managerial case.
- Statistical results for each question of each designated case should be addressed.
- Students may assume that the managers to whom you are reporting have a basic working understanding of statistical concepts.
- Students should not assume that managers to whom you are reporting are versed in technical statistical jargon.
- Presentations should also focus on managerial recommendations as well as results.
- Dates and times for each specific case presentation will be addressed in class.

Managerial Case Set I
Chapter 9 - Hypothesis Testing
- Case 2: Unemployment Study

Chapter 10 - Comparisons Involving Means
- Case 1: Par, Inc.
- Case 2: Wentworth Medical Center

Chapter 11 - Comparisons Involving Proportions and a Test of Independence
- Case 1: A Bipartisan Agenda for Change

Managerial Case Set II
Chapter 12 - Simple Linear Regression
- Case 1: Measuring Stock Market Risk
- Case 4: Major League Baseball Team Values

Chapter 13 - Multiple Regression
- Case 1: Consumer Research, Inc.
- Case 4: Predicting Winning Percentage for the NFL

Choose which case you choose to present in class by placing your initials in the last column.

Managerial Case Presentations – Sign Up Sheet		
Managerial Case Set I		
Chap 9 – Hyp. Testing	Case 2: Unemployment Study	
Chap 10 - Comparisons Involving Means	Case 1: Par, Inc.	
Chap 10 - Comparisons Involving Means	Case 2: Wentworth Medical Center	
Chap 11 - Comparisons Involving Proportions and a Test of Independence	Case 1: A Bipartisan Agenda for Change	
Managerial Case Set II		
Chapter 12 - Simple Linear Regression	Case 1: Measuring Stock Market Risk	
Chapter 12 - Simple Linear Regression	Case 4: Major League Baseball Team Values	
Chapter 13 - Multiple Regression	Case 1: Consumer Research, Inc.	
Chapter 13 - Multiple Regression	Case 4: Predicting Winning Percentage for the NFL	