



Dillard College of Business Administration

Syllabus: Advanced Applied Business Statistics

BUAD 5603, Section 170
Wednesday 5:30 pm to 6:50 pm
Dillard Building Room 175
Fall 2020

CONTACT INFORMATION:

Instructor: Dr. John E. Martinez
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Office Hours: 3:30 am to 4:30 pm Tuesday and Thursday
2:00 pm to 3:30 pm Monday and Wednesday via D2L,
or by appointment.

ZOOM Link to Invite Attendees:

[Join Zoom URL: https://msutexas-edu.zoom.us/j/99467529615](https://msutexas-edu.zoom.us/j/99467529615)

SYLLABUS CHANGE POLICY:

This syllabus is a guide for the course and is subject to change. All changes will be announced in class and students will be responsible for incorporating the changes into the syllabus. If, at some point, the university switches to an online format, then there will be significant changes in the manner in which exams are administered. Any exam taken online will be monitored through RESPONDUS, which will require students to have access to a webcam video.

COURSE MATERIALS:

SAS® Statistics by Example by Ron Cody. Copyright © 2013, SAS Institute Inc., Cary, North Carolina, USA

ISBN 978-1-61290-012-4 Electronic Book

ISBN 978-1-60764-800-0

Business Cases in Statistical Decision Making, 1994, Prentice-Hall by Lawrence H. Peters and J. Brian Gray, ISBN 0-13-285834-7

Course Description

Taking into consideration current statistical technology, the course focuses on the use and interpretation of software, while also demonstrating the logic, reasoning, and calculations that lie behind any statistical analysis. Furthermore, the course emphasizes the application of statistical tools to real-life business concerns.

The course is structured specifically around the most commonly used statistical techniques--for example, comparing two means, ANOVA, and regression using SAS. You will also learn how to test the assumptions for all relevant statistical tests. Major topics featured include descriptive statistics, one- and two-sample tests, ANOVA, correlation, linear and multiple regression, analysis of categorical data, logistic regression, nonparametric techniques, and power and sample size.

Course Pre-requisites

BUAD 3033 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 exams and quizzes.
- Ability to use statistical Software (with emphasis on SAS).
- Ability to comprehend statistical discussions and comment on them.

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

GLG3: 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: Graduates will demonstrate the capability to integrate knowledge across business disciplines.

GLG5: Our students will communicate at a professional level.

Objective: 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.
- The course includes examples using ODS Statistical Graphics procedures such as SGPLOT, SGSCATTER, and SGPANEL that show how SAS can produce the required statistics.

COURSE POLICIES:

A. Attendance Policy:

Students are expected to attend all class meetings for this course. Each meeting of the class will run as scheduled. Many important announcements are provided in class. You should always contact one of your classmates when you are absent. You are expected to log into D2L a minimum of once weekly to check for updates and announcements via postings and email. See the university catalog for the University Class Attendance Policy.

B. Other Related Policies

Electronic Communication Devices

Use of personal 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. Personal 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 will be expected to develop a base knowledge in using SAS. 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:

EXAMS	20%
Exam I	10%
Exam II	10%
Final Exam	20%
Managerial Cases	30%
Case Set I – Written Presentation	10%
Case Set II – Written Presentation	10%
Case Set III – Written Presentation	10%
SAS Assignments	30%
Program Set I	10%
Program Set II	10%
Program Set III	10%

GRADE EVALUATION:

As a **percent** of total points (1000pts):

A (Above 90%), B (80-89%), C (70-79%), D (60-69%), F (below 60%)

Total Points:

[Exam Avg. X 2.0] + [Final X 2.0] + [Case Avg. X 3.0] + [SAS X 3.0]

Syllabus Statement – Addendum

In order to help students keep track of their progress toward course objectives, the instructor for this class will provide a Midterm Progress Report through each student's Web World account. Midterm grades will not be reported on the students' transcript; nor will they be calculated in the cumulative GPA. They simply give students an idea of where they stand at the midpoint of the semester. Students earning below a C at the midway point should [schedule a meeting with the professor? Seek out tutoring? Both?]

Major exams:

Two major exams will be given. 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 interpreting output derived from SAS. 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:

The final exam will only cover material since the last exam. It will follow the same pattern and guidelines as the major exams.

Managerial Cases – Written Assignments:

Three sets of Managerial Cases are required. The goal of each case is to correctly understand a business situation, solve a real problem, and make a good business decision. Designated cases with specific formatting guidelines are attached at the end of this syllabus.

SAS Assignments:

Three sets of SAS assignments are required. Output from designated SAS Programs from the text with specific formatting guidelines are attached at the end of this syllabus.

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.

Lower Grades:

The instructor reserves the right to lower any student's final grade by a letter grade (i.e., A to B, D to F) for:

- (A) A negative, rude, unreasonably argumentative or inattentive attitude in class, or,
- (B) Repeatedly disrupting the class for any reason (tardiness), or,
- (C) Three or more absences, or
- (D) **NOT** showing respect for fellow classmates' questions, opinions, or class presentations.

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.

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 download or take a photo of any exam or graded answer sheet. 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.”

Correspondence

All correspondence regarding grades or class issues must be conducted through email using your **Midwestern State University (MSU) email or through D2L** . I will not return answers to questions to other email accounts and will not discuss grades or class standing over the phone. Since email or D2L messages are the most convenient means of communication, it is recommended that students use and regularly monitor their MSU email and D2L account. The subject line of any message sent to me in relation to this class **MUST** be the following: **BUAD 5603 First, Last Name**.

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 any assignment. 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 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 – Schedule is subject to change

Class	Date	Chapter and Topic
1	Aug 26	Presentation of Class Expectations and Requirements
2	Sep 02	1. Data and Statistics.

Class	Date	Chapter and Topic
		2. Descriptive Statistics: Tabular and Graphical Methods. 3. Descriptive Statistics: Numerical Methods.
3	Sep 09	4. Introduction to Probability. 5. Discrete Probability Distributions.
4	Sep 16	6. Continuous Probability Distributions. 7. Sampling and Sampling Distributions. 8. Interval Estimation.
5	Sep 23	Exam I
6	Sep 30	9. Hypothesis Tests. 10. Comparisons Involving Means.
7	Oct 07	11. Proportions and a Test of Independence.
8	Oct 14	Case Discussions and Excel Figures-Set I due
9	Oct 21	Review for Exam II
10	Oct 28	Case Assignment I Due and Exam II
11	Nov 04	12. Simple Linear Regression.
12	Nov 11	13. Multiple Regression.
13	Nov 18	13. Multiple Regression.
	Nov 25	Thanksgiving Break
14	Dec 02	Case Discussions and Excel Figures-Set II due
15	Dec 09	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.
- At the end of each case is an Assignment that students are to complete.
- Students are required to identify relevant variables, choose the appropriate analysis plan, produce correct results, interpret their findings and make recommendations regarding the managerial issues presented.
- Data sets for the various cases will be provided in the Contents section of D2L. The answer for each case question should be based on the information provided in the case itself.
- 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, as well as on the professionalism of your WORD and EXCEL output.
- Significant penalties are assessed for late work.
- A drop box folder will be set up in D2L for you to submit your work.
- A separate folder will be set up for each individual case.
- Missing even one case will entail severe penalties.
- Provide the following information at the beginning of each case:
First and Last Name

Case title (i.e., Amtech, Inc., etc.) - Set I (or II)
Semester, Year

- The following cases, which can be found in your text (Business Cases in statistical Decision Making), are required:

Managerial Case Set I

Required cases: Amtech, Plastiks, and Baldwin

The first case set is due by _____ pm on _____, _____.

Managerial Case Set II

Required cases: Pronto, Circuit, and Baldwin

The second case set is due by _____ pm on _____, _____.

Managerial Case Set II

Required cases: Easton, Servepro, and Westmore

The second case set is due by _____ pm on _____, _____..

SAS Assignments

- This assignment simply requires reproducing output from SAS programs found in your text.
- Make sure to label each program correctly (i.e. Program 4.3).
- A drop box folder will be set up in D2L for you to submit your work.
- A separate folder will be set up for each SAS program set.
- Submit your SAS output with separate sheets for each program (i.e., Program 2.3, Program 2.5, etc.) in one word document.
- Be sure to provide the following information at the top of each submission:
First and Last Name
SAS Programs - Set No. [I, II, or III].

SAS Program Set I – From chapters 1-4, reproduce output from all programs in those chapters. **This assignment is due by _____ on _____.**

Chapters 1-4, Select all chapter programs (25)

SAS Program Set II – From chapters 5, 6, & 10 reproduce output from all programs in those chapters. **This assignment is due by _____ on _____.**

SAS Program Set III – From chapters 7,8, & 9 reproduce output from all programs in those chapters. **This assignment is due by _____ on _____.**