



Course Syllabus: Adv Applied Business Stats

Dillard College of Business Administration
BUAD 5603 Section X20
Spring Semester 2026

Contact Information

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Course Description

The course emphasizes the application of statistical tools to real-life business concerns. 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 is structured around the most commonly used SAS statistical procedures. 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, and analysis of categorical data.

Course Pre-requisites - BUAD 3033 or equivalent and consent of Graduate Coordinator here to enter text

Textbook & Instructional Materials

Required text:

Connect 3P Inclusive Access Online Access for Essentials of Business Statistics / Jaggia, Kelly / 3rd edition / 9781265192228 / 180-days /
<https://connect.mheducation.com/class/j-martinez-inperson-280>

Optional text:

A Gentle Introduction to Statistics Using SAS® Studio in the Cloud
Copyright © 2021, SAS Institute Inc., Cary, NC, USA
978-1-954844-45-2 (Paperback) 978-1-954844-47-6 (EPUB)

Course Material: Access to SAS OnDEMAND for Academics (SODA) and to EXCEL SAS OnDemand for Academics (hence forth called ODA) is through SAS on a cloud platform; you don't have to download anything

Registering for ODA

To gain access to ODA, you need to register with SAS Institute. Part of the registration process is to create a SAS profile. If you already have a SAS profile, skip that portion of the instructions. To start, point your browser to:

<https://welcome.oda.sas.com>

Other ancillary Material:

In addition to the two texts, students need to have access to the following:

- WebCam video
- Thumb drive:

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 assignments may include the requirement that electronic versions of your work be submitted. If students have access to MSU-DCOBA labs, then downloading the SAS software is not necessary. SAS software is installed in most DCOBA labs.

COURSE POLICIES:

A. Attendance Policy:

Being an in-person course, physical classroom attendance is recommended, but not required. However, students are expected to access all videos and taped lectures for this course. Additionally, except for a limited number of situations, the instructor will not review class material nor reiterate class instructions to any student not regularly viewing class videos. Many important announcements are provided for this course. You are expected to log into D2L a minimum of once daily to check for updates and announcements via postings and email.

B. Other Related Policies

Use of personal electronic communication devices, other than through D2L, is not permitted during exams and students are required to disable any other electronic instruments during exams. Individuals holding devices that disrupt class may be asked to leave the class for the remainder of the session.

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.

Study Hours and Tutoring Assistance

[Click here to enter text](#)

Student Handbook

Refer to: [Student Handbook](#)

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct. [Office of Student Conduct](#)

Moffett Library

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

Grading

Table 1: Points allocated to each assignment

Assignments	Points
MAJOR EXAMS	300
Exam I	100
Exam II	100
Exam III	100
Quizzes	200
Business cases	200
Managerial cases	100
Textbook cases	100
Final Exam	300
Total Points	1000

Table 2: Total points for final grade.

Grade	Points
A	900
B	800 to 899
C	700 to 799
D	600 to 699
F	Less than 600

Quizzes (20%)

A quiz will be given over all chapters of the text. All quizzes are equally weighted. The quizzes are taken through CONNECT. Specified dates of completion are found in CONNECT. Quizzes will consist of objective-type questions [TF or MC] from CONNECT. The text and hand-held calculator are permissible for quizzes. Utilization of any other material, electronic or otherwise, will result in a zero for that quiz. A student's lowest quiz score, even if 0, can be replaced with their final exam grade. Failure to take a quiz on the scheduled date without prior permission from the instructor will result in a zero for that quiz. Failure to take any quiz without prior approval will result either in an 'F' or 'I' (incomplete) for that quiz. If, because of a truly unavoidable situation, you are absolutely not able to take a quiz at the scheduled time/date, it is your responsibility to contact your instructor well in advance to ask to take any quiz early. If a real, legitimate, last minute emergency occurs, it is your responsibility to contact me before the quiz begins.

Exams (30%)

Three 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. Exams will consist mostly of objective-type questions [TF or MC] from CONNECT. The text and hand-held calculator are permissible for exams. Utilization of any other material, electronic or otherwise, will result in a zero for that exam. A student's lowest exam score can be replaced with their final exam grade. 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.

Business Stat Cases (20%)

All cases are due by midnight, Sunday, May 10. Cases should be submitted to the appropriate submission folder on D2L. More detailed information about the requirement for all cases can be found in the attachment provided by the instructor either in hard copy form or through D2L course content.

A. Managerial Cases – Written Assignments (10%):

Three 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. Statistical output for these cases will be generated using SAS. More detailed information about this requirement can be found in the attachment [see Format for Managerial Case Writing Assignments] provided by the instructor either in hard copy form or through D2L course content.

B. Textbook cases – Written Assignments (10%)

Four cases from the text are required. Statistical output for these cases will be generated using EXCEL. These written cases should be formatted in accordance with the end-of-chapter case studies – Writing with Data.

Final Exam (30%)

A comprehensive final exam will be given. This exam will be an objective-type exam [TF or MC]. For students enrolled in the in-person class, the final must be taken in-person at the scheduled date based on the final exam schedule. A student's final exam score can be used to replace their lowest exam or quiz score. For students who are Distance or on-line Learners, the exam instructions will be available via D2L.

Extra Credit

No extra assignments are provided.

Late Work

For Business cases, late work may be accepted but only with permission from instructor and with severe penalties attached.

Make Up Work/Tests

Except for medical, campus, or governmental requirements, students are not allowed to make up missed assignments. The appropriate paper work should accompany the reason for missing an assignment.

Important Dates

- Last day for term schedule changes: January 23
- Deadline to file for graduation: February 16.
- Last Day to drop with a grade of "W": April 29.
- Refer to: [Drops, Withdrawals & Void](#)
- For other dates refer to this site: [Academic-Calendars](#)

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Online Computer Requirements

Taking an online class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class.

****Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion***

postings. Computers are available on campus in various areas of the buildings as well as the Academic Success Center. ***Your computer being down is not an excuse for missing a deadline!!** There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. Contact your instructor immediately upon having computer trouble. If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations; however, they are able to help you get connected to our online services. For help, log into [D2L](#).

Instructor class Policies

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 attitude in class, or
- (B) Repeatedly disrupting the class for any reason (tardiness), or
- (D) NOT showing respect for fellow classmates' questions or opinions, or
- (E) NOT following exam instructions

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](#).

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 produce 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 MSU email or through D2L. It is recommended that students use and regularly monitor their MSU email and D2L account. In your correspondence with instructor, use the instructor's email account, **not through D2L**. In your email to instructor, preface your text with 'BUAD 5603 First, Last Name' otherwise your text will be disregarded.

Nertiquette:

Students are expected to follow rules of common courtesy in all email messages, class discussions, chats, etc. Inappropriate or offensive messages will be forwarded to the appropriate authorities.

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first set of class days (for precise number of days, see Schedule of Classes) of a regular semester or the first set of class days of a summer semester may be eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

College Policies

Campus Carry Rules/Policies: Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “Run. Hide. Fight.” which may be electronically accessed via the University police department’s webpage: ["Run. Hide. Fight."](#)

Grade Appeal Process

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University [MSU Catalog](#)

***Notice:** Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Course Schedule:

Week or Module	Activities/Assignments/Exams
Week 01: Jun01	Chapter 1: Data and Data Preparation
Week 01: Jun02	Chapter 2: Data Visualization
Week 01: Jun03	Chapter 3: Summary Measures
Week 01: Jun04	Review Textbook cases and Intro to SAS
Week 01: Jun05	Chapter 4: Introduction to Probability
Week 02: Jun06	Chapter 5: Discrete Probability Distributions
Week 02: Jun09	Chapter 6: Continuous Probability Distributions
Jun 10-11	Exam I
Week 02: Jun12	Chapter 7: Sampling and Sampling Distributions
Week 02: Jun13	Chapter 8: Interval Estimation
Week 02: Jun15	Chapter 9: Hypothesis Testing
Week 02: Jun16	Chapter 9: Hypothesis Testing
Week 03: Jun17	Chapter 10: Comparisons Involving Means
Week 03: Jun18	Chapter 11: Comparisons Involving Proportions
Jun 19-20	Exam II
Week 04: Jun22	Review Mgr. Case I with SAS
Week 04: Jun23	Chapter 12: Regression Analysis
Week 04: Jun24	Chapter 12: Regression Analysis
Week 04: Jun25	Chapter 13: More Topics in Regression Analysis
Jun 26-27	Exam III
Week 05: Jun29	Review Mgr. cases
Week 05: Jun30	Review Mgr. Cases
Week 05: Jul02	Bus. Cases (Textbook and Managerial) due by midnight
Week 05: Jul02	Final Exam

Format for Business Cases

Textbook Cases - Writing with Data

All four of the textbook cases below are required. These written cases should be formatted in accordance with the end-of-chapter case studies – Writing with Data. The data for these cases is found in Appendices of the text, Appendix A - Big Data Sets: Variable Description and Data Dictionary. All cases are due by midnight on Wed., July01, 2026 .

A drop box folder will be set up in D2L for you to submit all five cases. Submit the individual files in WORD format. Provide the following information at the beginning of each case:

First, Last Name

Case number and title (i.e., Report 12.1 House_Price)

Report 2.1 College_Admissions, Report 3.1 House Price, Report 12.1 House_Price, and Report 13.3 TechSales_Reps

The following rubric will be used to evaluate this assignment:

	Insufficient	Fair	Good	Very Good	Excellent
Use of Evidence to Support Argument	No evidence is used to support an argument.	One piece of evidence is used to support an argument	Two pieces of evidence are used to support an argument.	Three pieces of evidence used to support an argument.	Four or more pieces of evidence used to support an argument.
Organization	Organization is not logical or discernable.	Structure is not well-organized or readable. Sequence of ideas is random or confusing. Concepts are disjointed and writing is unclear.	Structure is disorganized but readable. Ideas do not always flow in logical sequence. Concepts are not always cohesive, and writing is confusing.	Structure of the response is organized and readable. Ideas flow in a logical sequence, for the most part.	Structure of the response is well-organized and readable. Ideas flow in a logical sequence.
Language, mechanics, voice, and style	Response is not written in complete sentences.	Sentences are not well-built. Overall, word choice does not reflect content. Many errors in grammar, punctuation, spelling, or syntax.	Sentences are confusing occasionally. Often, word choice does not reflect content. Some errors in grammar, punctuation, spelling, syntax or semantics are present.	Sentences are clear with minimal confusion. Word choice reflects content adequately. Few errors in grammar, punctuation, spelling, or syntax.	Sentences are fluent and well-built. Word choice reflects the content effectively. Minimal, if any, errors in grammar, punctuation, spelling, or syntax.

Grading scale: Excellent- 90+; Very Good-80+; Good-70+; Fair-70+; Insufficient below 60. All Cases are due by midnight on July01, 2026

Format for Managerial Case Writing Assignments

- Each student is responsible for completing **three** designated Managerial Case Reports (see list below for list). However, only one case per section (or exam) is required.
- Each case should include the following components:
 1. Statement of the problem
 2. Statistical Results
 3. Policy conclusions

Append the following to each case:

1. **SAS Program code used**
2. **SAS Output with tables referenced**

- Use Microsoft's **WORD** processor 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. Each case assignment should be based on the information provided in the case itself.
- Consult the following case study for clarification about writing proper statistics reports:
Kilgore Mfg. - Managerial Case Analysis by Instructor for this course.
- Use one-inch margins throughout and either 10 or 12 character font.
- In addition to the three General Learning Goals (GLC) stated above, 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 SAS output.
- Significant penalties are assessed for late work.
- A drop box folder will be set up in D2L for you to submit all three cases.
- Missing even one case will entail severe penalties.
- Provide the following information at the beginning of each case:

First, Last Name

Case title (i.e., Circuit, etc.)

Semester, Year

Screenshop of your SAS OnDemand Registration Profile

- The following cases can be found in the CONTENT section of D2L. Only one case presentation per set is required:

Managerial Case Set I

Glenco

Managerial Case Set II

Circuit.

Managerial Case Set III

Easton.

All three Cases are due by midnight on Wed. July 01, 2026.

Specific Guidelines for Written Case Presentations

- First and foremost - remember that this is a managerial case presentation. Therefore, do not write it in an academic format, but rather in an easily readable and understandable format for a manager.
- Be sure to include **your name, case title, semester-year, and registration profile** at the top of the first page of your report. No cover sheet is required.
- Be sure to include an **introductory paragraph** as to what the case all about, or what problems need to be addressed.
- A second section presenting your **key statistical results** should follow your introductory paragraph. Tables should be clearly numbered and titled. All tables should be referenced by their table number. This section should include all important statistical results on which your policy recommendations are based.
- **Following the statistical results section**, a well-defined **summary and conclusions**, should be included along with clearly stated policy recommendations.
- If you happen to use descriptive statistics with EXCEL or SAS, you should exclude information that is not relevant for the case. For example: Would a manager actually care about kurtosis, or whether certain measures are carried to the fourth decimal place?
- Be **sure** to provide an appropriate title and number for each chart, graph, or table you use. Also, make sure that each chart, graph, or table is referenced in the body of the text. Chart, graphs, or tables should be in sequential order.
- Write in paragraph form, not in bullet form, with complete sentences and correct grammar.
- For most histograms, use class intervals that are easy to read, such as in intervals of 10, 100, or 1000.
- Except where fractional values are relevant, use whole numbers. For instance, is it necessary to know that the average age is 28.4621, or is 28 years sufficient?
- Do **not** include output from **Proc Contents** or **Proc Print** or **Data input statements**.
- APPENDIX I – Include **only** SAS code **used**.
- APPENDIX II – Include **only** SAS statistical results **used**. At the very top of the first page of this appendix, be sure to **screenshot** your ODA SAS registration profile. Do not type the registration name or number.
- Submit your cases in D2L under ASSESSMENTS-ASSIGNMENTS in appropriate submission folder for MGR cases. All submissions should be in **WORD** format.
- Late work will be penalized.
- Penalties are assessed for failure to adhere to guidelines stated above.