



Course Syllabus: Applied Analysis of Business

Dillard College of Business Administration

BUAD 5633

Spring 2026

Contact Information

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Office hours: 11am – 1pm Tuesdays, Wednesdays, and Thursdays.

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Course Description

Often, businesses want to know the effect their policies and decisions have on revenue, suppliers, customers; however, their policies cannot be implemented randomly. This poses a problem for a data scientist because most of the time non-random policies or decisions cannot be used to infer the effects of said policies or decisions.

General Learning Goals: Students will be asked to demonstrate their critical thinking and problem-solving skills by applying statistical learning techniques in their homework assignments and exams. This course aims to contribute to developing students' ability to communicate their analyses in a professional manner. Students will have to integrate the statistical knowledge they acquire from this course with multiple business disciplines.

Course Specific Learning Goals: Students should learn how to perform data analysis in R. Students are expected to learn the following statistical techniques: Linear Regression, Conditional RCT, Difference-in-Differences, Regression Discontinuity.

Textbook & Instructional Materials

- You will need to download the programming language [R](#) onto your computer.
- You will need to submit R script files for homework. I recommend using [R Studio](#) to write your scripts.
- You will need a working webcam to use Lockdown Browser and Respondus Monitor.

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Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given).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
Homework (12 at 2 pts each)	24
Midterm Exam	30
Final Exam	30

Table 2: Total points for final grade.

Grade	Points
A	75.6 or greater
B	67.2 to 75.6
C	58.8 to 67.2
D	50.4 to 58.8
F	Less than 50.4

Homework

Homework will be due on Tuesday every week. Some homework will be practice for the exams. Some homework will ask you to implement the techniques in R. Homework will be worth 2 points.

Exams

There will be 2 exams worth 30 points each during the semester. There will be a mix of coding as well as conceptual questions. Most questions will be multiple-choice while a few will ask to do calculations in a written response format.

Late Work

I do not accept late work after the answers have been posted.

Make Up Work/Tests

If you miss the midterm exam, your final exam score will replace the midterm.

Important Dates

- Last day for term schedule changes: Check date on [Academic Calendar](#).
- Deadline to file for graduation: Check date on [Academic Calendar](#).
- Last Day to drop with a grade of W: Check date on [Academic Calendar](#).
- Refer to: [Drops, Withdrawals & Void](#)

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](#).

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is 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) exist 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	Dates	Topic	Assignments
1	Jan 20 th – Jan 24 th	OLS	
2	Jan 25 th – Jan 31 st	OLS	HW 1 Due
3	Feb 1 st – Feb 7 th	Advanced Topics	HW 2 Due
4	Feb 8 th – Feb 14 th	Advanced Topics	HW 3 Due
5	Feb 15 th – Feb 21 st	Diagnostic Tests	HW 4 Due
6	Feb 22 nd – Feb 28 th	Midterm Practice	HW 5 Due
7	Mar 1 st – Mar 7 th		HW 6 Due Exam 1
8	Mar 8 th – Mar 14 th	Spring Break	
9	Mar 15 th – Mar 21 st	Causal Inference	
10	Mar 22 nd – Mar 28 th	DAGs	
11	Mar 29 th – April 4 th	Regression Discontinuity	HW 7 Due
12	Apr 5 th – Apr 11 th	Regression Discontinuity	HW 8 Due
13	Apr 12 th – Apr 18 th	Difference-in-Differences	HW 9 Due
14	Apr 19 th – Apr 25 th	Difference-in-Differences	HW 10 Due
15	Apr 26 th – May 2 nd	Final Exam Practice	HW 11 Due
16	May 3 rd – May 9 th	Review	
17	May 10 th – May 16 th		HW 12 Due Exam 2