

Syllabus: Introduction to Business Analytics

Dillard College of Business Administration

MIS 4153 MW 11:00 AM to 12:20 PM at DB 335

Fall Semester 2025

Contact Information

Instructor: Jie Zhang, Associate Professor of Management Information Systems

Office: Dillard Building 218

Office hours: Monday 12:30 PM to 2:30 PM, Tuesday 1:00 PM to 3:30 PM; Wednesday 12:30 PM to 1:00 PM; other time by appointment.

Office phone: (940) 397-4790

E-mail: jie.zhang@msutexas.edu

Course Materials

1. Required textbook: Business Analytics: Communicating with Numbers. 2nd Ed. Jaggia (2023) ISBN10: 1264302800 | ISBN13: 9781264302802.
2. Required software: JupyterLab with Python 3; Tableau; Microsoft Office.
3. You must have access to a computer with a webcam that allows you to install needed software, access the course materials, and complete assigned tasks. Please see page 53 of the [University return to campus report](#) for the standard computer requirements. (Chromebooks won't work due to insufficient computing power.)

Course Description

This course covers business analytics concepts, methods, tools, and applications. In this course, students will apply business analytics models to large datasets and make business decisions based on the analysis results.

Course Prerequisite(s)

MIS 3003 and BUAD 3033, or consent of the instructor.

Learning Goals

I. General Learning Goals:

- Problem-solving and decision-making abilities through critical analysis, evaluation, and interpretation of business information. Students will analyze business cases and make business decisions based on the analysis results.
- Competency in writing for common business scenarios. Written assignments are expected to communicate the analysis results accurately and shouldn't contain any grammatical or punctuation errors.
- Technology Utilization. Class lectures, demonstrations, and activities involve expanded coverage of information technology, such as decision analysis with Tableau and Python. Students will also demonstrate their ability to use common business computer applications, including Microsoft Word and Microsoft Excel.

These general learning goals are among those established by the Dillard College of Business Administration. General learning goals represent the skills graduates will carry into their careers. While assessing student performance in obtaining these general learning goals, Dillard College is assessing its programs. The assessments assist us as we improve our curriculum and curriculum delivery.

II. Course Specific Learning Goals:

After completing this course, students should be able to:

- Understand different types of business analytics
- Create graphs, charts, and other visualizations that demonstrate analysis of data
- Use various data mining methods to facilitate business decisions
- Construct reports that include graphical representations of data and analysis results

Course Policies

- Attendance Policy: Regular attendance is expected, and roll will be taken. Upon a student's fifth unauthorized absence, that student can be dropped for nonattendance and receive a grade of WF for the course. Class participation is mandatory. Students must read the assigned material and complete assignments prior to coming to class, and be prepared to discuss and ask questions relating to the assigned materials. See the MSU Student Handbook for the University Class Attendance Policy.
- Missed Exams, Homework, and Activities Policy: Only students with conflicts involving authorized University activities or having verified medical circumstances may ask in advance to make up missed examinations, homework, and/or activities. Written verification, in either case, is mandatory. Arrangements must be made in advance if at all possible. At the instructor's discretion, a deduction may be assessed for a late exam, assignment, or activity.
- Homework assignments: Assignments are due before the beginning of class on the specified due date. There is NO PROVISION for late work on any assignment. Plan and schedule to complete work early. Having your work completed on schedule is a key to early success in your business career.
- Email communication: The university-assigned (my.msutexas.edu) email address is required to receive all official communication from Midwestern State University. The university-assigned student email account

is Midwestern State University's official means of email communication with all students. Students are responsible for all official information sent to their university-assigned email account. Students are expected to check their email regularly and are responsible for all information sent to them via their university-assigned email address. ***Please make sure you check your my.msutexas.edu email for email communication regarding this course. When you email me, please also use your my.msutexas.edu email.**

- Bad weather procedures: If the university announces class cancellation or delay and our class is affected, please check our D2L page under the News section for detailed information and/or changes to our schedule.

Grading and Evaluation:

- Exams (3): Exams will cover assigned readings and practices, in-class lectures, and other assigned work.
- Activities: Up to 40 points will be assigned to activities (eight activities; five points each). Any points not assigned during the semester will be removed from the total possible for the course when calculating grade percentages. When there are more than eight (8) activities, we will drop the lowest score(s).
- Homework assignments: Up to 60 points will be assigned to homework (six homework assignments; 10 points each). All homework assignments are individual homework (not team/group work) unless explicitly announced otherwise by the instructor. Any points not assigned during the semester will be removed from the total possible for the course when calculating grade percentages. When there are more than six (6) homework assignments, we will drop the lowest score(s).

Table 1: Points allocated to each element

Element	Points
Exam 1	100
Exam 2	100
Final Exam	100
Activities	40
Homework assignments	60
Total Points	400

Table 2: Grading System

Grade	Points
A	360 or greater
B	320 to 359
C	280 to 319
D	240 to 279
F	Less than 240

Grades will be based only on the recorded points. The grade calculation does not consider personal reasons (e.g., need a specific grade to graduate, to keep financial aid, to keep a straight A record, etc.).

To help students keep track of their progress toward course objectives, the instructor for this class will provide a Midterm Progress Report through Navigate. Midterm grades will not be reported on students' transcripts or 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 to discuss their performance in this course.

Class Policy Regarding the Use of Generative AI Tools

During our class, we may use Generative AI tools such as ChatGPT in some activities/assignments. You will be informed which activities/assignments these tools are permitted to be used. Any use outside of this permission constitutes an academic integrity violation.

Academic Integrity:

Academic dishonesty includes cheating, collusion, and plagiarism. Cheating is (1) the use of any unauthorized assistance, (2) dependence upon the aid of sources beyond those authorized by the instructor, or (3) acquisition, without permission, of tests or other academic material. Plagiarism is the use of another person's published or unpublished work without full and clear acknowledgment. Collusion is collaboration with another person in preparing work offered for credit if the faculty member in charge does not authorize that collaboration.

Academic dishonesty will not be tolerated. Academic integrity violations include, but are not limited to:

1. Acting with intent to promote or assist cheating, including soliciting, encouraging, directing, or aiding attempts of fellow students to cheat on an exam, a quiz, or an assignment.
2. Soliciting information about exam questions from students who have taken a test.
3. Intentionally or negligently aiding someone taking an exam or a quiz.
4. Looking or glancing at another student's exam while the exam is being taken.
5. Soliciting answers to an exam, a quiz, or an assignment from a fellow student.
6. Using any device to record a test, including eyeglasses, cellphones, watches, calculators, etc.
7. Acquiring an exam or other academic testing material without the express permission of the professor who authored the exam.
8. Copying, disseminating, spreading, circulating, sharing, or publicizing any questions on an exam given for credit.
9. Violation of exam rules and procedures.

Academic integrity violations are grounds for being dropped from this class with an F and referral to the Dean of Students for disciplinary action, which may result in expulsion from the University.

Americans with Disabilities Act:

If a student has an established disability as defined by the Americans with Disabilities Act and would like to request an accommodation, that student should please contact me as soon as possible. Any student requesting accommodations should first contact Disability Support Services at 940-397-4140 in room 168 Clark Student Center to document and coordinate reasonable accommodations if you have not already done so.

Campus Carry Policy

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](#).

Syllabus Change Policy:

This syllabus is a guide for the course and is subject to change. Syllabus changes will be communicated in class and may or may not result in document changes. If absent, it is the student's sole responsibility to find out from other students, or the instructor, if anything affecting the course requirements or schedule was announced in the classes missed.

Classroom Behavior:

- Come to class on time. Take care of personal business before class. I do not expect you to leave and return to class (unless there is an emergency and you explain it to me after class).
- Computers will remain off during class except as directed by the instructor. Class time is not for surfing the Web, monitoring online social networks, texting, or catching up on email. You will be asked to leave the class if you continually violate this policy. The same thing applies to cell phone usage for messaging during class.
- Turn off your cell phones and any other electronic devices and put them away. Please, no texting. We can all go a little over an hour without contact with the outside world! Leaving class to return calls and coming back is not acceptable. If you have an emergency that requires your cell phone to be on, let me know, and we'll work something out.
- Dress appropriately and conduct yourself professionally and respectfully toward your peers and the instructor. Please don't talk while the instructor or others are discussing course materials. Participating in the class is the best way to avoid disturbing the class.

Course Schedule (see details in Table 3):

Please keep this syllabus as a reference. Students are responsible for all information contained in the syllabus and for any changes to the syllabus, which will be announced in class or on D2L. Any modifications announced in class or on D2L take precedent over the schedule below.

Table 3: Course Schedule

Week	Date	Day	Chapter	Topic
1	Aug. 25	Monday	Introduction	Class Overview
1	Aug. 27	Wednesday	1	Chapter 1: introduction to business analytics
2	Sept. 1	Monday	Labor Day	No class
2	Sept. 3	Wednesday	1	Chapter 1: introduction to business analytics
3	Sept. 8	Monday	2	Chapter 2: data management and wrangling
3	Sept. 10	Wednesday	2	Chapter 2: data management and wrangling
4	Sept. 15	Monday	2	Chapter 2: data management and wrangling
4	Sept. 17	Wednesday	2	Chapter 2: data management and wrangling
5	Sept. 22	Monday	review	Exam1 review
5	Sept. 24	Wednesday	Exam 1	Exam 1
6	Sept. 29	Monday	3	Chapter 3 summary measures
6	Oct. 1	Wednesday	3	Chapter 3 summary measures
7	Oct. 6	Monday	4	Chapter 4: Data Visualization
7	Oct. 8	Wednesday	4	Chapter 4: Data Visualization
8	Oct. 13	Monday	7	Chapter 7: Regression Analysis
8	Oct. 15	Wednesday	7	Chapter 7: Regression Analysis
9	Oct. 20	Monday	7	Chapter 7: Regression Analysis
9	Oct. 22	Wednesday	7	Chapter 7: Regression Analysis
10	Oct. 27	Monday	review	Exam 2 review
10	Oct. 29	Wednesday	Exam 2	Exam 2
11	Nov. 3	Monday	11	Chapter 11: introduction to data mining
11	Nov. 5	Wednesday	11	Chapter 11: introduction to data mining
12	Nov. 10	Monday	13	Chapter 13 supervised data mining: decision trees
12	Nov. 12	Wednesday	13	Chapter 13 supervised data mining: decision trees
13	Nov. 17	Monday	13	Chapter 13 supervised data mining: decision trees
13	Nov. 19	Wednesday	13/14	Chapter 13/14
14	Nov. 24	Monday	14	Chapter 14: Unsupervised Data Mining
14	Nov. 26	Wednesday	Thanksgiving Holiday	No class
15	Dec. 1	Monday	14	Chapter 14: Unsupervised Data Mining
15	Dec. 3	Wednesday	review	Final exam review
Final	Dec. 8	Monday	Final exam	Final exam (10:30 AM to 12:30 PM)