

MIS 4397/7397: Cloud Data Visualization

Spring Semester 2025

Section 21410

Thursday 6:00 – 9:00 PM

Room Melcher Hall 113: In-Person Instruction

Instructor: Dr. Andy Netzel

Email: anetzel@central.uh.edu

Office: N/A

Location: N/A

Office Hours: By appointment

Please contact me via email rather than through Canvas.

Course Focus

Cloud Data Visualization covers how to use Microsoft Power BI Desktop and the Microsoft Power BI Service to create, view, and share data insights. With experience in these two tools, you will be equipped to hit the ground in your next internship, at your first corporate job, or in your next role - ready to create visualizations of complex data and help leaders make decisions that matter!

Everyone is talking about the "cloud" - whether they are putting data in it, performing analytics on it, or building apps with it. But how are people getting data OUT of the cloud? Companies of all sizes – from supermajor oil and gas organizations to niche consulting firms - are reporting on cloud data like they never have before, and they are using business intelligence tools to do it! There is a significant need for resources who not only have the technical skills to build reports and mechanically operate the software but also have a foundation in business acumen – the sweet spot for (M)IS and analytics professionals.

This course covers principles of data-driven decision-making, how to connect to data, join it with other datasets, transform it for simplicity, perform calculations, visualize the results, make it available on mobile devices across an organization, and setting up Natural Language Queries.

The software used in this class will be Power BI Desktop and Power BI Pro – both can be provided by the university.

Required Software

Power BI Desktop and Power BI Pro

Course Evaluation

- All grades will be posted on Canvas.
- Exams
 - Account for 40% of your final grade. There will be two (2) exams. Each will count towards 20% of your final grade.
- Class assignments
 - Account for 20% of your final grade.

- Project
 - Accounts for 30% of your final grade.
- Professional Interest Presentation
 - Accounts for 10% of your final grade.

Activity	Percentage of Total Grade	Observations
Exams (two [2] in total)	40 (20 each)	
Class Assignments	20	
Project	30	
Professional Interest Presentation	10	
Total	100	

Class Attendance

Your attendance in class is mandatory. Please bring your laptops. If you miss class, you will be ineligible for any extra credit opportunities given during class. In addition, if you miss a class, it is your responsibility to find out what was covered by asking other students what you missed and by reading the assigned chapter.

Exams

There will be two (2) exams held throughout the semester according to the schedule provided below. These exams will consist of multiple-choice questions though the format is subject to change. Please note that exams are not cumulative and are based on the text, assignments, and class discussions. Exams will be completed during class time as shown in the schedule below. Exams will be taken on Canvas.

Assignments

All assignments are due by the midnight on the due date assigned. Assignment submission will be administered on Canvas.

Project

The class project will give you an opportunity to apply most of the skills you learn in this course. After the first quiz, you will be given more details on the specifics required by this project.

Professional Interest Presentation

Each student (in a group of three [3]) will deliver a presentation before the semester's end. The goal of this assignment is to develop and refine your presentation skills by creating and delivering a presentation on a professional topic of your choice. I must approve your topic at least one week before your assigned presentation date.

1. Choose a topic

Select a topic you are passionate about or have knowledge on. Examples: An overview of your industry or organization; a specific product that outsells or outperforms its competition; demo of little known software that can help other professionals. Get creative!

2. Visual Aids

Create visual aids to enhance your presentation. These can include slides, charts, videos, etc.

3. Time Limit

Your presentation should be 5 minutes long (give or take 30 seconds).

4. Q&A

Be prepared to answer a question or two from me.

5. Grading Criteria

Clarity and organization, effectiveness of visual aids, delivery and engagement with audience, ability to handle questions during Q&A, and meeting the presentation time goal (5 minutes +/- 30 seconds).

I will post the presentation schedule on Canvas.

Large Language Models, GPTs, and AI

Students may not utilize large language models, GPTs, or AI for purposes of assignment completion or quizzes.

Canvas

We will use Canvas for this course. Canvas is an online course shell that provides a framework and tools for instructor to put course material and activities online. Lecture slides and instructions for the assignments will be posted on Canvas. I will endeavor to provide a PDF version of the slides that I will use 24 hours prior to each class. It will remain available until midnight after the day of the class being taught.

Registered students are loaded into Canvas courses from the registration system. Starting a few days before classes start, registered students are loaded automatically into courses based on section numbers provided by instructors. Students who register late should allow at least one (1) to two (2) working days for their access to be enabled. Students should use their Cougarnet account to access Canvas. Click on the white icon – not the blue one.

For Canvas support, send an email to support@uh.edu with the students full name, course name, course number, section number, instructor’s name, and a description of the problem.

Grading

The grading scale being used in this class is as follows:

Grade	Numerical Value	Description
A	93 – 100 %	Excellent, superior achievement
A-	90 – 92 %	
B+	87 – 89 %	
B	83 – 86 %	Good, exceeding all requirements
B-	80 – 82 %	
C+	77 – 79 %	
C	73 – 76 %	Average, satisfactorily meeting all requirements

C-	70 – 72 %	
D+	67 – 69 %	
D	63 – 66 %	Poor, passing
D-	60 – 62 %	
F	0 – 59 %	Failing or withdrawing while doing failing work

Rounding: Your overall class grade (the weighted total of exams and group exercises) will be rounded up to the nearest whole number when the decimal portion is equal to or greater than 0.5.

Grade Disagreements

Petitions to receive a different grade for a piece of work on an assignment or exam must be submitted **in writing within one week of the grade being awarded**. It is the student's responsibility to check Canvas when the grade has been awarded. Any petition must include a detailed description of why the given grade should be changed. Petitions to receive a grade for a piece of work on an assignment or exam **where no grade has been awarded** to a student must be submitted **in writing within one week of the grade not being awarded**. It is the student's responsibility to check Canvas when the grade has not been awarded. Any petition must include a detailed description of why a grade should be awarded.

Typical scenarios for a grade no being awarded include, but are not limited to, a student not being present in class without permission to miss the class, or a student who is present in class but who has not been actively participating in a given group assignment. Please note that a re-evaluation will involve a full regrading of the assignment and may result in a higher, lower, or the same grade being awarded.

Extra Credit

There will likely be opportunities for extra credit throughout the semester. Details of any such opportunity will be shared at the appropriate juncture.

Classroom Behavior

The non-academic use of cell phones, laptops, tablets, and the like are distracting to yourself and those around you. Please silence or turn off your phone prior to entering the classroom. Take your earbuds out before instruction begins.

If you are causing a disruption, you will be asked once to cease the activity. If the activity continues, you will be asked to leave the classroom. Disruptive or threatening behaviors are strictly prohibited and will be dealt with in accordance with university policy.

You are professionals. Be proactive about problems; demonstrate attention to myself and your peers as an expression of respect. Email according to basic protocols of formality (your name, class number, etc.). Double check assignment uploads to Canvas. Demonstrating these behaviors helps create a positive learning environment and prepares you for professional settings in your future career.

Late Work Policy

If you miss a window to submit your work, you will be allocated a zero for that piece of work.

Please note: Technology failure is not an excuse for late work, so PLEASE do not wait until the last minute to submit any online work! If you miss an exam without a prior request to me for your justified absence that I have approved, then you will be given a zero for that exam.

Academic Integrity

I have a zero-tolerance policy on cheating. Cheating in the workplace can cost you your job and cheating in this class will cost you your grade (and sanctions from the dean of students). Cheating includes any action where you take credit for work on any assignment or exam that you did not do yourself. Likewise, if you allow another student to copy your work, you are complicit in cheating and equally guilty. It is your responsibility to ensure your work does not fall into the wrong hands (i.e. do not “forget” to delete your assignment from a shared computer). Plagiarism is cheating! If you include any material obtained elsewhere in your assignment, you must reference the original work. Plagiarism is not just when you “copy and paste” but is also when you take ideas from another place without referencing the original source. If in doubt, cite your source.

Mental Health and Wellness Resources

The University of Houston has a number of resources to support students’ mental health and overall wellness, including [CoogsCARE](#) and the [UH Go App](#). UH [Counseling and Psychological Services \(CAPS\)](#) offers 24/7 mental health support for all students, addressing various concerns like stress, college adjustment and sadness. CAPS provides individual and couples counseling, group therapy, workshops and connections to other support services on and off-campus. For assistance visit uh.edu/caps, call 713-743-5454, or visit a [Let’s Talk](#) location in-person or virtually. [Let’s Talk](#) are daily, informal confidential consultations with CAPS therapists where no appointment or paperwork is needed.

Need Support Now?

If you or someone you know is struggling or in crisis, help is available. Call CAPS crisis support 24/7 at 713-743-5454, or the National Suicide and Crisis Lifeline: call or text [988](#), or chat 988lifeline.org.

Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the Title IX website at <https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/>.

UH and Bauer Policies on Academic Dishonesty and Misconduct

High ethical standards are critical to the integrity of any institution and bear directly on the ultimate value of conferred degrees in the business community. All UH students are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that all academic dishonesty be recognized and addressed.

<http://www.uh.edu/provost/academic-affairs/policy-guidelines/honesty-policy/>

The Bauer Code of Ethics and Professional Conduct (Bauer Code) is designed to reflect the values held by the C. T. Bauer College of Business faculty and students. Just as professionals in medicine, law, and accounting operate within ethical principles designed to maintain a high standard of behavior within each profession, business professionals also should be guided by a set of principles specific to the business community consisting of managers, executives, and business employees. Therefore, the Bauer Code reflects principles we believe should govern a student's behavior while a Bauer College major. Ultimately, Bauer's reputation depends on the actions of its students and graduates. It is our hope that each Bauer College graduate applies these principles within his or her professional and personal lives both during and after college.

<http://www.bauer.uh.edu/business-ethics/bauer-code-of-ethics.php>

Your attire, language, and general disposition is to align with professional standards. Disruptive behavior and inappropriate conduct will result in disciplinary action. The following appears in the [Prohibited Conduct Section of the University of Houston Student Code Of Conduct](#):

3.6. Disruptive Classroom Conduct – Disruptive classroom conduct means engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities.

Sanctions for students found in violation of the Prohibited Conduct Section of the Student Code of Conduct include suspension and expulsion.

Requests for Accommodations

If you anticipate issues related to the format or requirements of this course, please contact the instructor to discuss ways to ensure your full participation in the course. The C.T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, in order to receive academic accommodations, students must register with [the Justin Dart Jr. Student Accessibility Center](#) (telephone 713-743-5400), and present approved accommodation documentation to their instructors in a timely manner. If you need to take an exam or quiz in the test center, please e-mail your instructor at least one week in advance.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston is committed to providing an academic environment and educational programs that are accessible for its students. Any student with a disability who is experiencing barriers to learning, assessment or participation is encouraged to contact the Justin Dart, Jr. Student Accessibility Center (Dart Center) to learn more about academic accommodations and support that may be available to them. Students seeking academic accommodations will need to register with the Dart Center as soon as possible to ensure timely implementation of approved accommodations. Please contact the Dart Center by visiting the website: <https://uh.edu/accessibility/> calling (713) 743-5400, or emailing jdcenter@Central.UH.EDU.

The [Student Health Center](#) offers a Psychiatry Clinic for enrolled UH students. Call 713-743-5149 during clinic hours, Monday through Friday 8 a.m. - 4:30 p.m. to schedule an appointment.

The [A.D. Bruce Religion Center](#) offers spiritual support and a variety of programs centered on well-being.

The [Center for Student Advocacy and Community \(CSAC\)](#) is where you can go if you need help but don't know where to start. CSAC is a "home away from home" and serves as a [resource hub](#) to help you get the resources needed to support academic and personal success. Through our [Cougar Cupboard](#), all students can get up to 30 lbs of FREE groceries a week. Additionally, we provide 1:1 appointments to get you connected to on- and off-campus resources related to essential needs, safety and advocacy, and more. The [Cougar Closet](#) is a registered student organization advised by our office and offers free clothes to students so that all Coogs can feel good in their fit. We also host a series of cultural and community-based events that fosters social connection and helps the cougar community come closer together. Visit the CSAC homepage or follow us on Instagram: @uh_CSAC and @uhcupbrd. YOU belong here.

Women and Gender Resource Center

The mission of the [WGRC](#) is to advance the University of Houston and promote the success of all students, faculty, and staff through educating, empowering, and supporting the UH community. The WGRC suite is open to you. Stop by the office for a study space, to take a break, grab a snack, or check out one of the WGRC programs or resources. Stop by Student Center South room B12 (Basement floor near Starbucks and down the hall from Creation Station) from 9 am to 5 pm Monday through Friday.

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Justin Dart, Jr. Student Accessibility Center](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Syllabus Changes

Please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible via email.

Tentative Class Schedule

*This outline is tentative. We will go over the topics described below in an applied way. That is, in solving problems our focus will be on the topic of the day. Please keep in-mind that the order in which these topics are covered may change in the event of unforeseen class disruptions. We will modify this schedule as time goes by if needed.

Date	Day	Topic(s)
January 16	Day 1	Course Intro, PC Set Up, + “As-a-Service” Models and The Cloud
January 23	Day 2	Power BI Desktop Orientation and Data Source Connections
January 30	Day 3	Principles of Dashboard Design, Visualizations, Themes, and Decision Making
February 6	Day 4	Intro to DAX and M – Columns, Measures, Tables
February 13	Day 5	Data Models and Relationships + Table Joins
February 20	Day 6	Working with Time Intelligence
February 27	Day 7	Putting It All Together
March 6	Day 8	Applied Practice – Business Analytics and Intelligence Request
March 13	Day 9	No Class – Spring Holiday
March 20	Day 10	Exam #1
March 27	Day 11	Advanced DAX and M – Part 1 + Intro to Final Project
April 3	Day 12	Advanced DAX and M – Part 2 + Careers and Tools in Data
April 10	Day 13	Power BI Web, Mobile App, and “Interview” with final project SME
April 17	Day 14	Limitations, Licensing, and Usage Analytics
April 24	Day 15	Applied Practice and Exam #2
May 1	Project	Final Project is due by 11:59 PM CST

Good Luck!

I look forward to our time together in class.

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