

**University of Houston – C.T. Bauer College of Business**

**Department of Decision and Information Sciences**

**MIS 4397 / 7397 - Cloud Data Visualization**

**Course Information**

**Spring 2019 – Tue 6:00 to 9:00pm**

Instructor: Patrick Boren  
Email: pgboren@uh.edu  
Office Hours: By Appointment – scheduled via email

***Prerequisite: Completed MIS 3376 / Database Knowledge***

***Cloud Data Visualization*** covers how to use Microsoft PowerBI Desktop and the Microsoft PowerBI Service to create, view, and share data insights. With experience in these two tools you'll 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 PowerBI 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 MIS Professionals.

In this course, we'll cover 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 even setup Natural Language Query.

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

**Teaching Methods:**

1. **Lectures and Discussions:** Important material from many sources will be covered in class. This coverage will be mostly in the form of hands-on problem solving. Students will work in the software applications in real time during class. Students should also plan to take careful notes on topics that are presented by the instructor.
2. **Assignments:** Problems and readings may be periodically assigned to help support and supplement material discussed during class. Assignments must be turned in on time.
3. **Exams:** Exams/Quizzes will be closed book/note and will test content from assignments and material discussed in class. Review sheets will be provided prior to the exam day.
4. **NOTES ONLINE - Blackboard:** Some material will be distributed on the Internet, using the **Blackboard** application. It is assumed that students know how to access the content on Blackboard.

5. **Announcements** regarding the class such as schedule changes, assignments, projects, and so on will be made in class during the first 10 minutes as well as on the web at the [Announcements](#) page. You are responsible for being in class ON TIME to hear the announcements and for checking the class web site for announcements regularly.
6. **Contacting the Professor:** You can reach me by email and I will try to get back to you within 48 hours. Realize that there are many of you and only one of me; if you wait until right before an assignment is due or the night before an exam, you may not get a response in time.
7. **Grading:**
  1. Quiz #1 – 20%
  2. Quiz #2 – 25%
  3. Class Exercises & Home Work Questions: 15%
  4. Project – 40%

Final course letter grade follows the numeric-letter grade system used at University of Houston. No + or – grades will be awarded.

8. **Project Description**

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 a set of data on which your project is based as well as more details on the specifics required.

**Course Policies:**

**Missed Classes:** The student is responsible for obtaining material, which may have been distributed on class days when he/she was absent. This can be done through contacting a classmate who was present or by contacting the instructor during his office hours or other times. Missed or late exams cannot be made up under any circumstances, unless an official excuse is provided. **Any uncoordinated, unexcused missed exam will result in a score of 0 for that exam.**

**Assignments:** All assignments are due at the beginning of class on the date due. As you know, this class has lab sections. In these sections, you will do exercises that correspond to topics already covered. As a result, this course outline is also a guide for the lab sections.

**Academic Dishonesty:** Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in course; and or expulsion from the University. For more information, refer to the "Academic Dishonesty" policy in the University's Catalog. The University of Houston Academic Honesty Policy is strictly enforced by the C. T. Bauer College of Business. No violations of this policy will be tolerated in this course. A discussion of the policy is included in the University of Houston Student Handbook, <http://www.uh.edu/dos/hdbk/acad/achonpol.html>. Students are expected to be familiar with this policy.

**Need for Assistance:** If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as outlined in this document, or which will require academic accommodations, please notify me as soon as possible. I will recommend that you contact the Center for Students with Disabilities. The contact person is Justin Dart in the CSD building #568, room 110. The numbers for the CSD office are Ph: 713-743-5400; TDD: 713-749-1527; Fax: 713-743-5396 or email: [uhcsd@uh.edu](mailto:uhcsd@uh.edu).

## Tentative Lecture Outline

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. But 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.

<b>Date</b>	<b>No.</b>	<b>Topic</b>
1/15/2019	1	Introduction to Course and PC Setup
1/22/2019	2	PowerBI Desktop Orientation and Data Source Connections
1/29/2019	3	Dashboard Design Theory, Visualizations, and Themes
2/5/2019	4	Introduction to DAX and M – Columns, Measures, Tables
2/12/2019	5	Data Models and Relationships
2/19/2019	6	Working with Time Intelligence
2/26/2019	7	Putting It All Together / Quiz #1 Prep
3/5/2019	8	<b>Quiz #1</b>
3/12/2019	9	Spring Break
3/19/2019	10	Advanced DAX and M – Part 1
3/26/2019	11	Advanced DAX and M – Part 2
4/2/2019	12	PowerBI Web Application
4/9/2019	13	Natural Language Query and Mobile Application
4/16/2019	14	Limitations, Licensing, and Usage Analytics / Quiz #2 Prep
4/23/2019	15	<b>Quiz #2</b>
4/30/2019	16	Final Project Due