MGT 2130 Data Visualization - Spring 2024

Course Description

This course covers the best practices in exploring and explaining data through visualizations such as graphs and charts, with an emphasis on business applications. Topics include effective design, choice of chart type, effective use of color, how to explore data visually, how to build data dashboards, and how to explain concepts and results visually in a compelling way with data.

Accessibility Disclosure

This course has been formatted to be as accessible as possible for all students, including closed captioning, alt tags, video and image descriptions, etc. However, due to this class's nature, not all visual elements within the course can be formatted in an accessible way that allows students needing visual assistance sufficient accommodations to use them. For example, there are Excel files that students must edit, manipulate, and apply filters to create data visualizations that convey data information. Students needing additional accommodations should work with the DRC on a case-by-case basis.

Prerequisites

This course makes extensive use of Excel. You need to understand the material from CSIS 2010 before taking this course.

Communication

Please contact me whenever you have questions. I am happy to provide help when you need it. The best way to reach me is through your Canvas Inbox. I will respond to e-mail within 24 hours.

Important Dates

- All assessments in this course have a due date. Due dates are at the bottom of this syllabus as well as on each assignment page.
- You may submit any work early.
- See the Student Academic Calendar for last day to drop, last day to withdraw, and other important dates.

Textbook and Required Materials

- *Data Visualization: Exploring and Explaining with Data* by Camm, Cochran, Fry, and Ohlmann, 1st edition. Rentals, used copies, and online versions are all good choices. You do not need any access codes or supplemental materials -- only the textbook.
- The most current version of Excel downloaded to a computer with a Windows or Mac operating system. As an active student, you have an Office 365 subscription allowing you to download it at no cost.

Course Learning Outcomes

By the end of this course, you will be able to:

- Explain the principles of data analytics required for effective data visualization
- Interpret and critique data visualizations that appear in various media
- Choose a data visualization type to match purpose and audience
- Use data visualizations to explore characteristics of a data set
- Create data visualizations that effectively communicate frequencies, variability, comparisons, proportions, correlations, and trends
- Create data dashboards
- Identify and correct common problems that arise in the data collection and visualization process

Grading

Your course grade is determined using the following weighted categories.

Application Assignments 40%

Most modules have an assignment in which you will apply the course material, typically through creating charts. Application Assignments require you to download an Excel file from Canvas, insert your work directly into that file, then submit through Canvas.

Discussions 10%

You will have several discussions in Canvas with classmates throughout the semester. These require a post in one module and a reply in the next module.

Quizzes 15%

Most modules have a Canvas quiz covering that module's assigned reading. Quizzes are untimed and can be saved and resumed.

Final Project 35%

You will apply the knowledge and skills learned throughout the course to create several charts from a set of data, making your own decisions about chart types and design (10%),

conduct a peer review of a classmate's chart (5%), combine some of your previous work into a data dashboard of your own design (10%), and write a narrative explaining your design choices (10%).

At any point in the course, you will be able to see all your grades and your current overall grade in Canvas. At the end of the course, your overall percentage grade will be rounded to the nearest hundredth of one percent and converted to a letter grade as shown in the table below.

	87.00%-89.99% = B+	77.00%-79.99% = C+	67.00%-69.99% = D+	0%-59.99% = E
93.00%-100% = A	83.00%-86.99% = B	73.00%-76.99% = C	63.00%-66.99% = D	
90.00%-92.99% = A-	80.00%-82.99% = B-	70.00%-72.99% = C-	60.00%-62.99% = D-	

Late Work

- Two parts of your Final Project are due on the last day of the Final Exam period. Those cannot be submitted late.
- I will accept all other work up to 7 days late, but it loses 10% of the points available per day late. Days late are rounded up to the next whole number. Work submitted more than 7 days late earns no credit and will not receive feedback.
- If circumstances out of your control make it impossible for you to complete an assignment on time, contact me before the due date for a *possible* exception. Exceptions will be rare.

Institutional Syllabus

The College provides information on Institutional Policies, Learning Support & Tutoring Services, and Advising & Counseling Support. That information can be found at the Institutional Syllabus link in the global navigation menu of Canvas, and should be considered as part of our course syllabus.

Citations and Permissions

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