Course Syllabus for DS 750: Data Storytelling

NOTE: This syllabus document contains the basic information of this course. The most current syllabus is available in the full course.

Course Description

Data storytelling involves using data to tell a compelling narrative that helps audiences understand, engage with, and act on the information. This course combines data analysis with communication techniques to present data in an informative and engaging way. This course is specifically designed as a graduate-level requirement for the MSDS degree, focusing on teaching students how to effectively communicate insights through data storytelling techniques. Participants will learn to craft engaging stories that resonate with various audiences and drive decision-making.

Course Objectives

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

- Analyze and interpret data to uncover key insights.
- Craft compelling and impactful data narratives.
- Create visual aids and interactive visualizations that support their stories.
- Present data stories effectively to a variety of audiences.
- Apply ethical considerations to ensure integrity in their storytelling.

Course Components

Discussions: Throughout the semester, you will engage in weekly discussion forums designed to deepen your understanding of data storytelling concepts and techniques. For each module, you will post an original response of 250–300 words that thoughtfully addresses the prompt, drawing on course readings, activities, or your own experiences. Your initial post should demonstrate critical reflection—identifying challenges, proposing solutions, or connecting theory to practice. In addition to your original contribution, you will respond to at least two classmates with substantive feedback (each reply should be at least 100 words). These peer replies are opportunities to build on others' ideas, offer different perspectives, and foster a collaborative learning environment. Discussion performance is evaluated not only on the clarity and depth of your own posts but also on the quality and constructiveness of your peer engagement.

Projects: Project work allows you to apply your skills to real-world data and storytelling challenges. Each module includes a substantive project—ranging from coding assignments and case study analyses to interactive dashboard development—that builds toward the capstone. Early projects focus on mastering specific skills such as data cleaning or exploratory analysis, while later projects require synthesis of multiple

competencies, including narrative structure, visualization design, and ethical reflection. You will share your drafts with peers for feedback, and you are encouraged to iterate on your work before final submission. Projects are graded on technical accuracy, creativity, narrative coherence, and professionalism of presentation.

Quizzes: Quizzes will assess your grasp of key technical concepts, best practices, and theoretical frameworks covered in each module. Administered on Canvas, these brief, closed-book assessments typically consist of multiple-choice and short-answer questions. Quizzes are intended to check comprehension and encourage consistent study habits rather than punitive testing. Prompt completion and accuracy are important; quizzes account for nearly one-third of your final grade.

Activities: Hands-on activities are woven throughout the course to reinforce learning in an informal, experimental setting. These tasks might include guided data-cleaning exercises, quick visualization challenges, or storytelling brainstorming sessions. Activities are scored on completion and effort, not on achieving a perfect solution, because their purpose is to give you space to explore tools and concepts without the pressure of formal grading. By the end of each activity, you should feel more comfortable using Python, R, Tableau, and Power BI features and more confident in structuring and refining your data stories.

Grading

Your mastery of course content is assessed using a variety of methods:

Activity	**Percentage**
Discussions	25%
Quizzes	30%
Projects	25%
Activities	20%
Total	**100%**

Final grades are assigned using the following scale:

90–100%	A
80–89%	B
60–79%	C
0–59%	F