

Syllabus

DSBA 5122/HCIP 5122 - Visual Analytics and Storytelling

Instructor: Ilieva Ageenko, PhD (email: iageenko@charlotte.edu)

- **Office Hours:** Monday's from 4pm – 6pm by appointment via Zoom

TA: Shivani Gadepally (email: sgadepa2@charlotte.edu)

Welcome to DSBA 5122/HCIP 5122

Welcome to DSBA 5122 Visual Analytics and Storytelling for Fall 2024. This class is in person on Thursdays (**Starting August 22nd**) from 530-830 in room 1101, and all course content and assignments will be available on this Canvas site.

The data science cycle includes many phases, including problem definition, data acquisition, data engineering, analysis, reporting, interpreting, visualization, and presentation of the results of analysis/insights derived. This course covers the last three steps in this sequence. It introduces the field of visual analytics, which integrates interactive analytical methods and visualization, and utilizes this to build analytical stories that influence decision makers. Topics include: critical thinking, visual reasoning, perception/cognition, principles of interaction with an audience, building of visuals into a story to influence, and delivery of presentations whether in person or through video conferencing tools.

Course Objectives

In this course, you will:

- Evaluate and critique visualization designs
- Learn visualization techniques & theory
- Develop compelling stories using data visualization
- Deliver impactful presentations
- Practice and Master the art of delivering your own story using data visualization

Visualization Tools

You will do most of your visualization work in this class with Tableau and depending on your project it could involve a bit of SQL, and you will also use Powerpoint.

Office Hours

Ilieva Ageenko Office hours: Tuesday's from 4pm – 6pm by appointment via Zoom and 5:00pm before class on Thursdays.

Shivani Gadepally (TA) by appointment and through Zoom, you will coordinate with her directly.

Grades

- Homework = 15%
- Team Assignments = 35%
- Case Study= 10%
- Final Project = 40%

Grading Scale

- A (Excellent) = 90.00% – 100.00%
- B (Good) =80.00% – 89.99%
- C (Fair) = 70.00% – 79.99%
- D (Passing) = 60.00% – 69.99%
- U (Failing) = below 60%

Outline

Week 1 - 8/22/2024: Welcome. Introduction to Visual Analytics and Storytelling, and overview of Visualization Tools.

- **Why is storytelling important?**
- **Setting Expectations:** Understanding what to expect from the course.

Week 2 - 8/29/2024: Storytelling using Visual Data Analytics

Week 3 - 9/5/2024: Cognitive Aspects of Visualization and Using Effective Visuals

Week 4 - 9/12/2024: Developing Your Own Story and First Video Recording

- **Developing Your Own Story:** Techniques for crafting a compelling story using data.
- **“Big Story Idea” and Video Recording Assignments:** Students will develop a “Big Story” that to carry throughout the semester and create series of video presentations of their data story to practice the art of crafting and delivering stories using visual analytics.

Week 5 - 9/19/2024: Best Practices: De-cluttering

Week 6 – 9/26/2024: Develop Your Personal Story with Flexibility and Confidence

Week 7 - 10/03/2024: Delivering Impactful Presentations with Visuals

Week 8 - 10/10/2024: Break – No Classes

Week 9 - 10/17/2024: MidTerm Team Project Presentations (Storytelling using Tableau Dashboard Visualizations)

Week 10 - 10/24/2024: Developing Analytical Story

Week 11- 10/31/2024: Influencing Through Story Telling

Week 12- 11/07/2024: Case Study Class Discussion

Week 13- 11/14/2024: Pulling All Together

Week 14 - 11/21/2024: Sneak Preview of Your Final Project

- **Q&A Session:** Address any questions or concerns about the final project.

Week 15 - 11/28/2024: Thanksgiving – No Classes

Week 16- 12/05/2024: Final Individual Project Presentations (Storytelling using Visualizations)

Course Policies

Syllabus Changes:

The standards and requirements set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes to this syllabus will be posted on the course Canvas.

Attendance:

Students are expected to attend all class meetings and to arrive before the class starts. Class topics are integrated, with each week building on prior weeks. Failure to attend or to arrive on time can adversely affect individual performance, ability to contribute to the group project, and the earned letter grade. If a student misses a class due to work or other reasons, it is their responsibility to get notes from peers; instructors do not hold extra repeat class sessions.

Grades for materials developed in class will be 0 for classes that are missed.

I will conduct this class in an atmosphere of mutual respect. I encourage your active participation in class discussions. Each of us may have strongly differing opinions on the various topics of class discussions. The conflict of ideas is encouraged and welcome. The orderly questioning of the ideas of others, including mine, is similarly welcome. However, I will exercise my responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion.

Students are encouraged to work directly with their instructors regarding class absences for medical appointments, military/court orders, and/or personal and family emergencies, such as a death in the immediate family, where a student is able to provide an instructor with appropriate supporting documentation of the absence. The final decision for approval of absences and missed work or make-up work is determined by the instructor.

The Office of Student Assistance and Support Services (SASS) can provide notification to faculty of emergency situations when a student is unable to do so and when the office has been made aware of such emergencies. In such situations, the SASS office may also be able to assist with verification of such emergencies once a student is able to return to classes. The SASS office does not provide verification of absences for car trouble, weather issues, personal activities, work, weddings, vacations, or University-sponsored events. Absences related to such activities should be discussed directly with the faculty member.

Should a student need assistance from the SASS office in verifying an emergency situation, they can submit an [online request form](#) and attach supporting documentation. Please note that students are not required to go through the SASS office at any time regarding absence verification, and the SASS office does not have the authority to excuse absences, allow for make-up work, or provide other academic accommodations.

Grade Discussions:

The instructor will discuss grades only in person (and not via telephone or e-mail) and only with the student (not with parents, spouses, etc).

Credit and Time Expectations:

This three credit course requires three hours of classroom or direct faculty instruction and approximately six hours of out-of-class student work each week for approximately 15 weeks. Out-of-class work may include but is not limited to: required reading, written assignments, video presentation development and team participation and contribution.