University of North Carolina at Charlotte
School of Data Science

DSBA 6010: Analytical Storytelling
Spring 2022
Doug Hague

Credits, Days/Time, Location:
3 Graduate Credits
Wednesday 5:30-8:15 pm  Center City Building Dubois Center Rm 601

Faculty Information:
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Office Hours: Monday: 4:00-5:30 in my office at or by appointment. Please contact Barbara
Howard at Barbara.Howard@uncc.edu to confirm a time.

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This syllabus contains the policies and expectations I have established for Analytical
Storytelling. Please read the entire syllabus carefully before continuing in this course. These
policies and expectations are intended to create a productive learning atmosphere for all
students. Unless you are prepared to abide by these policies and expectations, you risk losing
the opportunity to participate further in the course.

Description:
This is a topics course, covering advanced topics in Data Science.

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. The Analytical Storytelling course covers the last two steps in this
sequence. However, these steps are not simple. It is often the difference between successful
and unsuccessful projects. Therefore, this class will be more comprehensive than the usual
courses on storytelling that mostly focus on the best visual presentation of the results obtained
through the analysis. It will focus on data/analysis interpretation, visualization, presentation,
speaking, and situation awareness.

Prerequisites: Consent of the Instructor
**Course Objectives:**
Students in this course will learn how to interpret data and results of analysis, select appropriate data and analysis presentation formats and visualizations, make effective presentations, speak effectively in front of the audience, and understand group dynamics.

**Teaching Strategies:**
Materials presented in this course will be covered through lectures, homework, in-class exercises and student presentations, and role playing.

**Required Books:**
Storytelling with Data: Let’s Practice, Knaflic 2020

Exceptional Presenter: A Proven Formula to Open Up and Own the Room, Koegel, 2007

**Reference Books (not required):**

Data Points: Visualization that Means Something, Yau, Wiley, 2013

Even a Geek Can Speak: Low-Tech Presentation Skills for High-Tech People, Asher, Persuasive Speaker Press, 2001

The Exceptional Presenter Goes Virtual: Take Command of Your Message, Create and “in-Person” Experience and Captivate Any Remote Audience, Koegel, Greenleaf Group Press, 2010

**Institutions:**
http://www.storytellingwithdata.com/
http://www.frameworksinstitute.org/
https://www.perceptualedge.com/

**Evaluation Methods:**
Homework: 10%
Online Discussion 10%
Presentations 20%
Case Study 10%
Project: 50%

**Grade Scale:**
A = 90-100%
B = 80 - 90%
C = 70 - 80%
U = below 70%
Topical Outline of Course Content
1. Introduction to Analytical Storytelling
2. Developing Your Story
3. Effective Visuals
4. Effective Visuals: Clutter
5. Cognitive Aspects of Visualization
6. Delivering Presentations
7. Midterm student presentations
8. Developing an Analytical Story
9. Remote Presentations
10. Putting it Together
11. Case Study
12. Influencing through Storytelling
13. Final Project Presentations

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 posted on the course Canvas website.

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. You should expect that if your conduct during class discussions seriously disrupts the atmosphere of mutual respect I expect in this class, you will not be permitted to participate further.

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.

In cases of absence due to pregnancy or parenting (pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery from any of these conditions), students should contact the Title IX Office to obtain absence verification by completing the form at http://bit.ly/332eaGd.

**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). Office hours are listed above.

**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.

**Electronic Devices:**
Students are not allowed to use any electronic devices during the class, unless otherwise instructed by the instructor.

**Inclement Weather:**
University Policy states the University is open unless the Chancellor announces that the University is closed. The inclement weather hotline number to call is 704-786-2877. In the event of inclement weather, check your email and NinerAlerts. The instructors generally only cancel class if the University is closed.

**Self-Help:**
It is common for college students to experience challenges that may interfere with academic success such as academic stress, sleep problems, juggling responsibilities, life events, relationship concerns, or feelings of anxiety, hopelessness, or depression. If you or a friend is
struggling, we strongly encourage you to seek support. Helpful, effective resources are available on campus at no additional cost.

- Visit the Counseling and Psychological Services website at caps.charlotte.edu for information about the broad range of confidential on-campus mental health services, online health assessments, hours, and additional information.
- Call CAPS at (704) 687-0311 if interested in scheduling an appointment with a counselor. After-hours crisis support is also available through this phone number.

Copyright:
My lectures and course materials, including presentations, tests, exams, outlines, and similar materials, are protected by copyright. I am the exclusive owner of copyright in those materials I create. I encourage you to take notes and make copies of course materials for your own educational use. However, you may not, nor may you knowingly allow others to reproduce or distribute lecture notes and course materials publicly without my express written consent. This includes providing materials to commercial course material suppliers such as CourseHero, Chegg, and other similar services. Students who publicly distribute or display or help others publicly distribute or display copies or modified copies of an instructor's course materials may be in violation of University Policy 406, The Code of Student Responsibility. Similarly, you own copyright in your original papers and exam essays. If I am interested in posting your answers or papers on the course web site, I will request your written permission.

COVID-19 Protection
It is the current policy of UNC Charlotte that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the 49er community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings in all indoor spaces on campus, including classrooms and labs, regardless of vaccination status. Failure to comply with this policy in the classroom or lab may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Office of Student Conduct and Academic Integrity for charges under the Code of Student Responsibility.

Students are expected to attend every class and remain in class for the duration of the session when it is safe to do so in accordance with university guidance regarding COVID-19. Failure to attend class or arriving late may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student’s obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. Any unexcused absence or excessive tardiness may result in a loss of participation points.

Students are encouraged to work directly with their instructors regarding their absence(s). For absences related to COVID-19, please adhere to the following:

- **Complete your Niner Health Check** each morning.
- **Do not come to class if you are sick.** Please protect your health and the health of others by staying home. Contact your healthcare provider if you believe you are ill.
• **If you are sick:** If you test positive or are evaluated by a healthcare provider for **symptoms of COVID-19**, indicate so on your **Niner Health Check** to alert the University. Submit a copy of your Niner Health Check notification email to your instructors. Upon learning that you have tested positive or have been diagnosed for symptoms of COVID-19, either from your reporting or from Student health Center testing or diagnosis, representatives from Emergency Management and/or the Student Health Center will follow up with you, and your instructors will be notified of the need for accommodations, as necessary.

• **If you are unvaccinated** and have been notified to self-quarantine due to exposure, indicate so on your **Niner Health Check** to alert the University. Representatives from Contact Tracing/Emergency Management and/or the Student Health Center will follow up with you as necessary. Submit a copy of your Niner Health Check notification email directly to your instructors.

• **If you are vaccinated AND symptomatic AND have been notified to self-quarantine** due to exposure, indicate so on your **Niner Health Check** to alert the University. Representatives from Contact Tracing/Emergency Management and/or the Student Health Center will follow up with you as necessary. Submit a copy of your Niner Health Check notification email directly to your instructors.

If a student provides faculty with correspondence from Emergency Management, University Contact Tracers, the Student Health Center, and/or Student Assistance and Support Services regarding their specific directive (self-quarantine, quarantine, or isolate) and/or indicating the student’s isolation end date, this correspondence serves as official University documentation. Any of these forms of University communication are sufficient for reentry into the classroom.

**Code of Student Responsibility:**

“The **UNC Charlotte Code of Student Responsibility** (the Code) sets forth certain rights and responsibilities in matters of student discipline. The Code defines these responsibilities and guarantees you certain rights that ensure your protection from unjust imposition of disciplinary penalties. You should familiarize yourself with the provisions and procedures of the Code” (Introductory statement from the UNC Charlotte brochure about the Code of Student Responsibility). The entire document may be found [here](#).

**Academic Integrity:**

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online.

*Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.*

Students should select unique subject areas for the Adapting Visualizations homework. If by chance more than one student chooses the same original visualization, modified visuals shall be unique enough for the grader to easily determine that the students worked independently. Please use care in selecting visuals to ensure uniqueness from other students. Students should
also not select visuals from Data Storytelling sites or books where before and after visualizations are already provided. Instructor may ask student to reattempt homework if there is any perception of violation. If a second homework is perceived to be in violation, the student will receive a 0 for that homework.

**Special Needs:**
If you have a documented disability and require accommodation in this course, contact Disability Services, Fretwell 230, phone: 687 4355 voice/TDD) the first week of the semester. Information about available services may be found at Office of Disability Services. Accommodations for learning will be arranged by that office and communicated to the Instructor. If you speak English as a second language, please inform the instructor.

**Diversity Statement:**
UNC Charlotte strives to create an academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.
All students are required to abide by the Sexual Harassment Policy and the Standard for Responsible Use of Information Resources. Sexual harassment, as defined in the UNC Charlotte Sexual Harassment Policy, is prohibited, even when carried out through computers or other electronic communications systems, including course-based chat rooms or message boards.

**Religious Accommodation:**
It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a Request for Religious Accommodation to their instructor prior to the census date for enrollment for a given semester. The census date for each semester (typically the tenth day of instruction) can be found in UNC Charlotte’s Academic Calendar.

**Food Insecurity:**
Food insecurity is defined by the USDA as “a lack of access to enough food for an active, healthy life.” Food insecure categories include: reduced caloric intake, reduced food quality, lack of variety in diet, disrupted eating patterns, and hunger. Research shows that college students experience food insecurity at higher rates than the American household rate, and that food insecurity can negatively impact academic performance and persistence. In recognition of this problem, UNC Charlotte offers assistance to students facing food insecurity through an on-campus food pantry. The Jamil Niner Student Pantry (JNSP) is located on the east edge of campus at 1224 John Kirk Road. It has regular hours which may change from semester to semester; please see the website at [https://ninerpantry.charlotte.edu/](https://ninerpantry.charlotte.edu/) for schedule and details on its services, as well as resources about hunger and food insecurity among college students.