

ENG 6808, Sec. 1 (19463)- Narrative Information Visualization (3 credits)
Spring 2017 Syllabus

Instructor: Sonia Stephens

Office hours: **

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or by appt.

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Office location: CNH 408A

Meeting date/time: Tu 6:00-8:50 pm in CB1-109

In this course, we will explore the theory and practice of narrative information visualization—telling stories about data in visual form. Interactive information visualizations are used in the digital humanities, technical communication, sciences, and journalism to engage audiences tell a story, while also facilitating learning through self-guided exploration. The choices that designers make while creating visualizations support visual storytelling and shape audiences' interpretation of the underlying data and their meanings.

This course has theoretical and hands-on components. We will explore historical and current information visualization techniques and examples, using tools from rhetoric, critical theory, interactive narrative, and cognitive science. Students will also learn about tools for creating information visualizations, and then apply their understanding to a hands-on project creating an interactive visualization using a dataset of their choice. Projects may involve working with textual, visual, numerical, or geospatial data, among other sources. No previous coding experience is necessary.

Course Objectives:

- To understand the history of narrative information visualization and related theory from rhetorical, cognitive, and critical-theoretical perspectives.
- To become familiar with contemporary genres and trends in narrative visualization.
- To gain knowledge about data sources and tools for creating interactive visualizations.
- To develop technical skills for creating interactive visualizations.
- To be able to critically assess and evaluate interactive visualization projects.

Required Texts:

- Ferster, *Interactive Visualization: Insight through Inquiry*.
- Cairo, *The Functional Art*.
- Delagrange, *Technologies of Wonder*. (online at <http://ccdigitalpress.org/wonder/>)
- Headrick, *When Information Came of Age*.
- Spence, *Information Visualization: An Introduction*. (available as e-book through UCF library)
- Other readings will be shared on our Webcourses site.

Attendance and Participation: Appropriate classroom behavior is expected at all times. As a matter of common courtesy, please arrive on time prepared to stay for the entire class. Proper classroom conduct also entails creating a positive learning experience for all students; therefore, sexist, racist, homophobic, or other derogatory remarks will not be tolerated. My top priority is to provide a safe environment for learning.

Your participation in class discussions is required and is expected at every class meeting. This is a discussion-based, student-centered class; it only works if you take responsibility for your learning by showing up prepared and engaged. Full preparation includes reading assigned material and writing or thinking about it, as well as bringing course materials to class with you. Attendance is crucial because of the vital role discussion plays in this course and unexcused absences will negatively affect your grade. Absences will be excused in cases of emergency or for prior arrangements of short duration.

You must contact me ASAP once you know you will be absent. Students who will need accommodation for a religious holiday occurring during the semester should notify me during the first week of class. Be advised that we will cover materials in class that are not included on the syllabus; you are responsible for all material covered during your absence.

Digital devices are fine, as long as they are being used for legitimate class purposes. Cell phones, etc., should be muted before class begins. If needed for a critical situation, inform me before class.

You must have a KnightsMail account and check it regularly.

Grading: Your grade will be determined by the following:

- *Class participation (10%):* In-class engagement, peer feedback, discussion preparation.
- *Discussion posts (10%):* Before class on most weeks, you will post a thoughtful 200-300 word response and synthesis of the week's readings. You may respond to a posted question, address a point from a previous class discussion, or make connections to another area of inquiry. You should also thoughtfully respond to at least one classmate's post by the weekend.
- *Data visualization commentaries (6%):* We will build a class reference and commentary on: 1) insightful or provocative data visualizations, 2) example datasets for potential project use, and 3) tools that may help us construct visualizations.
- *Excel-based statistical visualization activity (5%):* Hands-on practice with some standard descriptive & inferential statistics and creating charts for quantitative and qualitative data.
- *Project proposal (18%):* Describe your plan for your infovis project, including questions to answer, data sources, type of software/coding to be used, narrative structure, interaction design, and planned appearance. You will need to draw on theory readings to defend your preliminary choices.
- *Project progress report (8%):* Describe what you have accomplished, tasks and challenges remaining, any shifts in execution or modifications, and plans for completion.
- *Information visualization project (20%):* You will research and construct a narrative interactive visualization using data and software of your choice. Possible starting points for this project include a specific dataset, visualization genre, topical situation or question, or theoretical argument. Regardless of starting point, you are expected to give thoughtful consideration to all the aspects of design we cover in the course.
- *Project reflection (18%):* This will be a 10-12 page scholarly paper describing the empirical construction and theoretical justification for your project.
- *Project presentation (5%):* During our scheduled finals day, you will prepare a presentation of your project's goals, theoretical background, development process, and final outcome.

Grade Scale (%): 94-100 = A 93-90 = A- 89-87 = B+ 86-83 = B 82-80 = B- 79-77 = C+
76-73 = C 72-70 = C- 69-67 = D+ 66-63 = D 62-60 = D- >60 = F

Written Grading Standards:

- An A text is exceptional. It presents sophisticated and significant critique and is guided by a meaningful argument. It contains the required elements of the assignment, is written in an engaging style, is arranged in a logical manner, is memorable, and is visually appealing. It is free of mechanical errors.
- A B text is strong. It contains all required elements of the assignment. It is generally above average in terms of the criteria mentioned above, but falls short of excellence in one or more category. It has only minor mechanical errors.
- A C text is competent. It contains all required elements of the assignment. It is generally average in terms of the major criteria listed above. It has a few mechanical errors.

- Low C or D work is weak. It does not include the required elements of the assignment and it falls below average in terms of one or more of the major criteria.
- F work fails in terms of one or more of these criteria.

Late Work: Assignments are due at the beginning of the class on their due date. All work is due in class on the announced date except in the event of an emergency, and if you have notified me about this before class. For all final drafts, one letter grade will be deducted for each day late until a grade of F is reached.

Plagiarism: All work must be original by the student. Undocumented use of another’s words, ideas, images, or other media is plagiarism, as is allowing someone else to write or edit your work for you. If you are caught plagiarizing, depending on the severity, you will fail the assignment. You also risk automatically failing the course, disciplinary referral to the appropriate dean, and possible expulsion from UCF. See the UCF Golden Rule for further information. Papers written for this course may be submitted to Turnitin.com at my discretion.

Disability Statement: UCF is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. None will be provided until the student has met with the professor to request them. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116.

Mandatory Reporting and UCF Cares: As a professor, I have a mandatory reporting responsibility. If you share information with me about sexual misconduct or crimes that may have occurred on campus, I am required to contact the appropriate UCF student support agency. If you prefer to remain anonymous and are seeking resources or support for yourself, a friend, or a classmate, you can also visit UCFCares.com for free services and information about a variety of student concerns. You can reach a UCF Cares staff member at ucfcares@ucf.edu or call (407) 823-5607 between 8am and 5pm. If you are in immediate distress, UCF offers counselors 24/7 at (407) 823-2811.

Copyright: This course may contain copyright-protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, or distribute these items outside of the classroom environment. All copyright materials are credited to the copyright holder.

Disclaimer: *Changes to the syllabus or schedule will be made at my discretion and will be announced in class.*

Topics to be covered

Assignments due

Part 1: Introduction, history, and theory

Course introduction, defining the field
 History of information visualization
 Visual storytelling
 Cognitive science, perception, and data design
 Rhetoric of information visualization

Commentaries on visualization examples, tools, and datasets

Part 2: Practice and project development

Asking questions & identifying data
 Understanding project data structure
 Project design: color, placement, & interactivity

Excel-based analysis activity
 Project proposal

Developing an information architecture

Part 3: Critique and evaluation

Critical perspectives on classification & using
design/development software

Visualizing risk and uncertainty

Usability, access, advocacy, and ethics

Project progress report

Final project and reflection due