

Visualizing information: Storytelling with data

11:374:240

Meeting time: Check Rutgers class schedule

Instructor: Mary L. Nucci, Ph.D.

Office: Cook Office Building, Room 214

Office Hours: By arrangement

Email: mnucci@sebs.rutgers.edu

Course description

The course objective is to build student's skills in developing visual ways to tell a science story with information and data. The activities and discussions will expand abilities to engage with and communicate science more effectively and improve their public science communication skills (general and technical). Students will practice many types of visualizations, and develop a final portfolio of visualizations, and deliver a presentation, relevant to a current research project. We will focus on scientific and non-scientific audiences. Participants in this course will:

- Explore and discuss bad, good, and better ways to visualize and communicate information and data to tell science stories effectively.
- Develop broader understanding and confidence with visualizing a range of types of data and data visualizations.
- Explore storytelling with data principles, design considerations, and visualization techniques/strategies to deliver the most effective science visuals alone and as part of an infographic.
- Engage in an authentic experience of designing and presenting science stories with data through visualizations and infographics to peers and scientists to apply gained skills and confidence.

Learning goals:

1. Students will be able to articulate the basic components of telling a story with data and how to present information visually.
2. Students will become more confident in developing a range of different visualizations, depending on the information available and message being conveyed.
3. Students will become more confident in developing a report, 1-pager, slide deck, slide doc, and infographic to communicate their story.
4. Students will be able to employ best practices of design and layout consideration when developing their visualizations.
5. Students will become more confident in presenting science stories with data to peers and other scientists.

Required texts

Reading materials will be made available on the Canvas course site.

Class protocol

Class begins promptly at 9:15 am. Be on time. If you have a conflict or an unavoidable reason to be late, please let me know in advance by phoning, texting or sending an email. Note that all papers (response papers, final paper) should use American Psychological Association formatting (<http://libguides.rutgers.edu/writing>).

Online Class protocol

If for some reason the connection (either yours to class or professor's to class) is cut off, you are expected to sign back in or wait for the connection. If there is an ongoing issue with the professor's connection, look for an email with instructions. If there is an ongoing issue with your connection, please email the professor at mnucci@sebs.rutgers.edu or text (with your name in the text body) to 908 963-9842.

Due dates

I will NOT accept late assignments unless you speak to me in person or by phone no later than 24 hours BEFORE the due date. NO email or text communications will be considered. I am here to help you learn the material in the class, so if you need extra time for a legitimate (e.g., illness, family emergency, religious observation) excused absence or reason I will work with you. However, note that repeated requests will not be allowed.

Academic Honor and Integrity

Plagiarism in any form will not be tolerated. This includes the improper citation of materials from any source, including the Internet. Rutgers University Policy on Academic Integrity considers cheating, fabrication, facilitation of academic dishonesty, plagiarism, and the denial of access to others of materials or information as violations of academic integrity. All violations will be dealt with according to the rules laid out in the policy which can be found at <http://academicintegrity.rutgers.edu/>, ranging from loss of class credit to expulsion depending on the level of the violation. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.

- all student work is fairly evaluated, and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

Attendance

Rutgers students are expected to attend all scheduled course meetings. University policy excuses absences due to religious observance or participation in Rutgers-approved activities, and class, lab, or exam for any reason, you need to report your absence through the Absence Reporting Website <https://sims.rutgers.edu/ssra/>. The system will generate an email to me about your absence, but the University recommends that you also contact me directly to let me know of your absence.

Class schedule (subject to change)

Class Schedule	
Week 1	Introduction to data: data storytelling
Week 2	Issues in visualization
Week 3	Research and storytelling
Week 4	Its all about the audience
Week 5	Graphical decisions
Week 6	Reviewing what we know: check in
Week 7	Storyboarding
Week 8	Color in visualizations
Week 9	Infographics
Week 10	Building your presentation
Week 11	Critiquing visuals
Week 12	Presentation skills
Week 13	Pulling it all together
Week 14	Class presentations, peer review

Assignments and grading

Class expectations include: 1) being prepared for each class; 2) actively listening and sharing ideas; 3) keeping an open and curious mind; 4) disagreeing productively; 5) actively working toward a deeper understanding including asking questions; and 5) building on and appreciating the contributions of others in class. The course assignments include a combination of small homework assignments, readings, discussions and mini video lectures and semester long project (one pager, two slidedecks, infographic).

Assignment	Points
Research topic	5 points
One pager (fact sheet, one sheet)	15 points
Slidedecks for science and non-science audiences	30 points
Infographic	15 points
Final presentation	7 points
Homework visualizations	18 points
Discussions	5 points
Final reflection essay	5 points

Total 100 points

A: 90-100 points; B: 80-89 points; C: 70-79 points; D: 60-69 points.

Basic Needs Resources

Any student who has difficulty affording groceries or accessing sufficient food, or who lacks a safe and stable place to live, is urged to contact the Rutgers Student Food Pantry and/or the Dean of Students (contacts below). Furthermore, please notify the professor if you are comfortable doing so, as they may be able to provide additional support.

Rutgers Student Food Pantry

<http://ruoffcampus.rutgers.edu/food/> (Links to an external site.)

848-932-5500

College Ave Student Center, Room 115 (126 College Ave). Check their website for hours and additional locations.

The Rutgers Student Food Pantry is dedicated to helping all Rutgers students in need of food, no questions asked. Students will be provided with groceries that typically last about one week.

Dean of Students Office

<http://deanofstudents.rutgers.edu/> (Links to an external site.)

848-932-2300

88 College Avenue, New Brunswick, NJ 08901

Mon-Fri, 8:30am-5:00pm

The Dean of Students Office at Rutgers University-New Brunswick provides solutions, services, and support to help students navigate Rutgers University. The Office serves as a student support network by providing advocacy, problem resolution, and critical incident intervention for those times when additional assistance is needed. Please call to schedule an appointment to meet with a representative from the Dean's office. [Just In Case Web App](http://codu.co/cee05e) (Links to an external site.) <http://codu.co/cee05e> (Links to an external site.)

Student Wellness Services

[Just In Case Web App](#)

<http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884

17 Senior Street, New Brunswick, NJ 08901

www.rhscaps.rutgers.edu

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181

3 Bartlett Street, New Brunswick, NJ 08901

www.vpva.rutgers.edu

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800

Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854

<https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at:
<https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555

<http://www.scarletlisteners.com>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.