Data Journalism • JMC 3284

Instructor: Megan A. Duncan, Ph.D.
Time: 12:30 to 1:45 p.m. Tuesday and Thursday
Place: 043 Shanks Hall
Contact: meganduncan@vt.edu
Office hours:
    2:15-3:15 p.m. Tuesdays in 148 Shanks
    9:30-10:30 a.m. Wednesdays online:
        https://virginiatech.zoom.us/j/97386738025

Welcome!

This is the inaugural semester of Data Journalism.* This is the class I was hired to teach, and I'm really glad to make it happen. My hope is that in 15 years the data journalism program will be loved and adored around the world, and you can look back and say "I was there before it was cool."
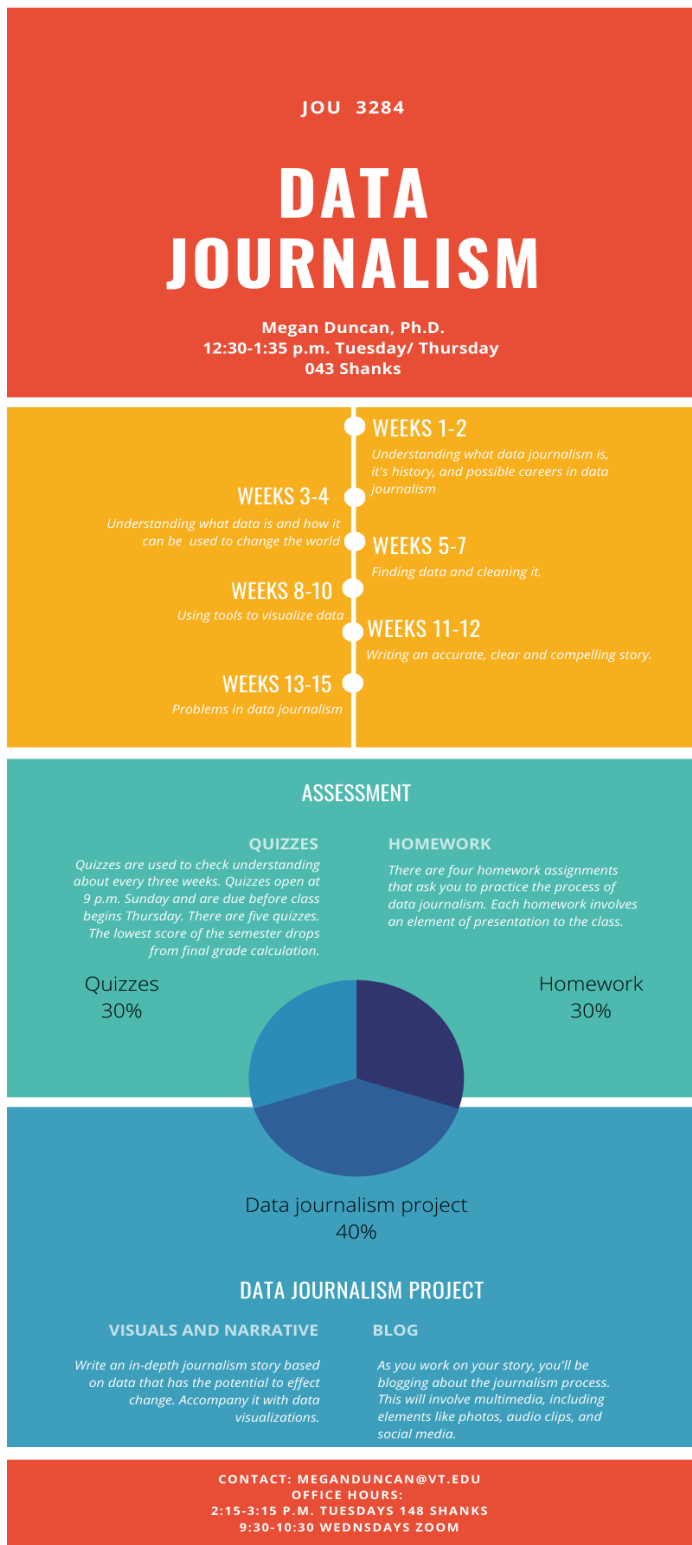
I'm excited to be here. I'm excited to be in person. I'm excited to meet you. I'm also anxious that none of this is going to go to plan. A big part of that is just my personality. Another part of it is very little has gone according to plan the past few semesters. Below, you'll find what I've spent a big chunk of time planning for us to do in the next 16 weeks. But, let's keep in mind that the plan may change because of circumstances beyond the control of me, the department, or the university. Let's respect each other, do our best, learn, think deeply, talk openly and have fun.

This course is data journalism – meaning, it's not "data mining," "data analytics," or "data visualization." It's a little of all of those things, and more. You can go to computer science to focus on Python to scrape data from websites, or engineering to focus on visualization. This course touches on those, but puts a specific focus on the ways we can use the journalism process to bring data to life and have an impact on society. We'll employ critical thinking to discuss what data is, how it might be incomplete or biased, and how it can reveal truths that would otherwise be hidden. We'll also cover the history of data journalism, careers in the field, and the inequities in the space.

(*It was offered as a special topics course years ago, but this is the first time it has its own course number.)

Course Visualization

JOU 3284

DATA JOURNALISM

Megan Duncan, Ph.D.
12:30-1:35 p.m. Tuesday/ Thursday
043 Shanks

WEEKS 1-2
Understanding what data journalism is, it's history, and possible careers in data journalism

WEEKS 3-4
Understanding what data is and how it can be used to change the world

WEEKS 5-7
Finding data and cleaning it.

WEEKS 8-10
Using tools to visualize data

WEEKS 11-12
Writing an accurate, clear and compelling story.

WEEKS 13-15
Problems in data journalism

ASSESSMENT

QUIZZES
Quizzes are used to check understanding about every three weeks. Quizzes open at 9 p.m. Sunday and are due before class begins Thursday. There are five quizzes. The lowest score of the semester drops from final grade calculation.

HOMEWORK
There are four homework assignments that ask you to practice the process of data journalism. Each homework involves an element of presentation to the class.

Quizzes
30%

Homework
30%

Data journalism project
40%

DATA JOURNALISM PROJECT

VISUALS AND NARRATIVE
Write an in-depth journalism story based on data that has the potential to effect change. Accompany it with data visualizations.

BLOG
As you work on your story, you'll be blogging about the journalism process. This will involve multimedia, including elements like photos, audio clips, and social media.

CONTACT: MEGANDUNCAN@VT.EDU
OFFICE HOURS:
2:15-3:15 P.M. TUESDAYS 148 SHANKS
9:30-10:30 WEDNSDAYS ZOOM

Course Info

Data Journalism is designed to provide students with an overview of the current industry practices. The emphasis is on developing critical thinking skills and practical writing skills associated with using data as the foundation of journalism.

The goals of this course are twofold: (1) students will learn how to identify and tell and accurate, clear and compelling stories with data and (2) students will consider the role data plays in revealing truths, the ways data may be biased or incomplete, and the limits, of data.

This course meets in person, and course materials will be distributed and collected on Canvas. Each day you should check the "Modules" feature on Canvas for an overview of the day's lesson and assignments. I am available via email if you have any questions during the course.

Course Catalog Description

3284: DATA JOURNALISM Numeracy and data analysis in news reporting. Data sourcing and visualization in storytelling. Ethical and legal issues in data use. Careers in data journalism. Pre: COMM 2024, COMM 2034. (3H,3C)

Course Objectives

Having successfully completed this course, the student will be able to:

1. Locate appropriate data sources for news reporting.
2. Determine strengths and weaknesses of datasets and biases related to answering questions only with numbers.
3. Pose questions that data analysis might answer.
4. Use basic software to analyze and visualize data for accurate news reporting.
5. Draw meaningful insights from data analysis and visualization for news reporting.
6. Demonstrate data storytelling and sourcing techniques that can help readers, listeners and viewers understand what statistics might reveal.
7. Analyze how data sources and information-collection techniques affect reliability for news reporting and public understanding.
8. Follow ethical and legal standards in interpreting data and reporting statistically based news.
9. Describe careers available to those with data-journalism skills.

Course Materials

The required textbook for this course is:
Dykes, B. (2019). *Effective data storytelling: how to drive change with data, narrative and visuals.* John Wiley & Sons.

I'll be using a digital version, and you can too. It's available here:
https://bookshelf.vitalsource.com/books/9781119615729

You'll also be required in Associated Press style throughout the semester. The ***Associated Press Stylebook*** years 2019 or newer – print or digital – is strongly recommended.

We'll also be reading online chapters of textbooks during the semester. Those textbooks are open sourced and available for free. They include:
● Howard, A. (2014) The Art and Science of Data-Driven Journalism
https://www.gitbook.com/book/towcenter/the-art-and-science-of-data-driven-journalism/details
● Stray, J. (2016). The Curious Journalist's Guide to Data
https://www.gitbook.com/book/towcenter/curious-journalist-s-guide-to-data/details
● Gray, J., Bounegru, L., and Chambers, L., eds., *The Data Journalism Handbook.*
http://datajournalismhandbook.org/1.0/en/

Class Participation

I have absolutely no idea how our first semester back in person will work out. I hope it goes swimmingly. My expectation is for you to attend each class. I hope that's possible. I'm planning for a lot of class discussion and activity.

I'm counting on you to keep up with readings, speak up when you have questions, and contribute to class discussion. You're also required to present and teach a lesson to the class for various parts of the homework assignments. Show up to class and engage.

Technology Requirements

This is a data journalism course, and I intend to make it interactive.

Students must be comfortable with:

- Uploading and downloading files from Canvas
- Using Microsoft Word, Excel and PowerPoint
- Using Tableau and other types of analytics/data visualization programs

- Using Adobe CC and/or design programs such as Canva
- Using email for communication
- Sending an email attachment
- Navigating the internet
- Using online search engines

Student technical support for this course is available through the Virginia Tech Customer Support Center **4Help**. Help is available 24/7 to reset passwords, monitor system outages, and answer questions on a variety of computer issues.

For Canvas help or just to ask a quick question: Click **Help** at the upper right corner of any screen within the Canvas.vt.edu domain and select one of the help options from the pop-up window. Canvas helpdesk consultants are available 24/7 via chat, phone, or through online ticket.

Students should bring their laptops with the required department software (Microsoft Office and Adobe Creative Cloud) to class each meeting. Students should use their laptops to stay engaged with course material and avoid getting distracted by non-classwork.

We'll be using a free student Tableau account. Information on that is here:
https://www.tableau.com/academic/students

Academic success

Assignments

Category	Assignment	% of final grade
Quizzes	**5 opportunities. 4 count.** Each is 15 points. Quizzes are about every three weeks. They open Sunday and are due before class Thursday. Lowest score drops from final grade calculation	30
Individual data journalism project	**10 parts. Lowest grade of parts 1-7 drops from final grade.** 5 blog posts Draft of visuals Draft of narrative Peer edits Final product on website Class presentation	40
Homework	**4 assignments** Data journalism deconstruction Data acquisition Data cleaning Data visualization Takeover post-analysis	30

Grade calculation

A 92.5-100   **A-** 90.0-92.49

B+ 87.0-89.99   **B** 83.0-86.99   **B-** 80.0-82.99

C+ 77.0-79.99   **C** 73.0-76.99   **C-** 70.0-82.99

D+ 67.0-69.99   **D** 63.0-63.99   **D-** 60.0-62.99

F lower than 60.0

Week	Tuesday	Thursday	Quiz	Homework	Individual data project
1	1.1 What is data journalism?	1.2 Careers			
2	2.1 History of data journalism	2.2 Why data journalism?			
3	3. 1 What makes a good data journalism story?	3.2 Data story types	Quiz 1		
4	4.1 What is data? What are numbers?	4.2 Brainstorming			Project idea (no grade)
5	5.1 Data journalism presentations	5.2 Finding public data		Data journalism deconstruction presentation	
6	6.1 FOIA	6.2 Data searching and scraping	Quiz 2		Blog post 1: "The idea"
7	7.1 Data cleaning	7.2 Data cleaning			Blog post 2: "The data"
8	8.1 Perception	8.2 Beyond the pie chart		Data cleaning	Blog post 3: "Decisions, Decisions"
9	9.1 Tableau	9.2 Tableau	Quiz 3		Blog post 4: "BTS"
10	10.1 Gephi	10.2 Data visualization tool presentations		Data tool presentation	
11	11.1 Writing the story	11.2 Getting the interviews			Blog post 5 "BTS Part II"
12	12.1 Bias in data	12.2 Common mistakes	Quiz 4		First draft of visuals
13	13.1 Editing data journalism	13.2 Panama Papers		Data acquisition	First draft of narrative
14	14.1 Diversity in data journalism	14.2 Taking the next steps	Quiz 5		Peer edits of narrative/visuals
15	15.1 Final class meeting				Data story presentation Final draft of narrative/visuals

Your responsibilities

Academic integrity

The Undergraduate Honor Code pledge that each member of the university community agrees to abide by states:

"As a Hokie, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

Students enrolled in this course are responsible for abiding by the Honor Code. A student who has doubts about how the Honor Code applies to any assignment is responsible for obtaining specific guidance from the course instructor before submitting the assignment for evaluation. Ignorance of the rules does not exclude any member of the University community from the requirements and expectations of the Honor Code.
Honor Code Pledge for Assignments: The Virginia Tech honor code pledge for assignments is as follows:

"I have neither given nor received unauthorized assistance on this assignment."

The pledge is to be written out on all graded assignments at the university and signed by the student. The honor pledge represents both an expression of the student's support of the honor code and a commitment to uphold the academic standards at Virginia Tech.

1. All assignments submitted shall be considered "graded work" and all aspects of your coursework are covered by the Honor Code. All projects and homework assignments are to be completed individually unless otherwise specified.
2. The Academic Integrity expectations for Hokies are the same in an online class as they are in an in-person class. Hokies are expected to meet the academic integrity standards at Virginia Tech at all times.
3. Commission of any of the following acts shall constitute academic misconduct. This listing is not, however, exclusive of other acts that may reasonably be said to constitute academic misconduct. Clarification is provided for each definition with some examples of prohibited behaviors in the Undergraduate Honor Code Manual located at https://www.honorsystem.vt.edu/

- o **CHEATING:** Cheating includes the intentional use of unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise, or attempts thereof.
- o **PLAGIARISM:** Plagiarism includes the copying of the language, structure, programming, computer code, ideas, and/or thoughts of another and passing off the same as one's own original work, or attempts thereof.
- o **FALSIFICATION:** Falsification includes the statement of any untruth, either verbally or in writing, with respect to any element of one's academic work, or attempts thereof.
- o **FABRICATION:** Fabrication includes making up data and results, and recording or reporting them, or submitting fabricated documents, or attempts thereof.
- o **MULTIPLE SUBMISSION:** Multiple submission involves the submission for credit – without authorization from the instructor receiving the work – of substantial portions of any work (including oral reports) previously submitted for credit at any academic institution of attempts thereof.
- o **COMPLICITY:** Complicity includes intentionally helping another to engage in an act of academic misconduct, or attempts thereof.
- o **VIOLATION OF UNIVERSITY, COLLEGE, DEPARTMENTAL, PROGRAM, COURSE, OR FACULTY RULES:** The violation of any University, College, Departmental, Program, Course, or Faculty Rules relating to academic matters that may lead to an unfair academic advantage by the student violating the rule(s).
- *"If you have questions or are unclear about what constitutes academic misconduct on an assignment, please speak with me. I take the honor code very seriously in the course. The normal sanction I will recommend for a violation of the Honor Code is an F* sanction as your final course grade. The F represents failure in the course. The "*" is intended to identify a student who has failed to uphold the values of academic integrity at Virginia Tech. A student who receives a sanction of F* as their final course grade shall have it documented on their transcript with the notation "FAILURE DUE TO ACADEMIC HONOR CODE VIOLATION." You would be required to complete an education program administered by the Honor System in order to have the "*" and notation "FAILURE DUE TO ACADEMIC HONOR CODE VIOLATION" removed from your transcript. The "F" however would be permanently on your transcript."*

Masking policy and the pandemic

As I'm preparing this syllabus, the current Virginia Tech policy requires masks to be worn in the classroom at all times by all humans. I will wear a mask. You will wear a mask. Any guests will wear a mask. Masks will cover our mouths and noses. We will respect each other by keeping our masks on for the duration of class and leaving the classroom if we need to remove the mask.

- If you are not wearing a mask when you arrive to class, I will:
- Ask you to don a mask or go get a mask privately.
- Prohibit you from working with group members.
- Ask you to leave the classroom for the day if you refuse to wear a mask.

- I may end the class if the problem persists.

The masking policy may change during the course of the semester. Follow ready.vt.edu for updates. I will update my classroom policy as university requirements change.

Support

Accommodations:

Accommodation recommendations from the Dean's office for ANY documented learning need (the Dean's office supplies such paperwork) will be honored. Please notify me in person by the second week of class to discuss how I can ensure that you have a comfortable and reasonable learning environment.

Any student who has been confirmed by the University as having accommodations for learning must notify me in person by the second week of class so that we can work together to ensure your learning needs are met. For more information about accommodations, please go to the **Services for Students with Disabilities** office website: http://www.ssd.vt.edu/

Academic Support Services:

Any student needing academic support should investigate the University's services at http://www.studentsuccess.vt.edu/index.html

For complete information on student services at Virginia Tech, please see: http://www.dsa.vt.edu.

Inclusion and support

I will honor your request to address you by your chosen name and pronouns. Please advise me of this early in the semester.

I respect and honor your cultural and religious holidays. If you have a religious or cultural observance that will coincide with this class, please let me know in an email or office hour meeting by the start of the third week of classes.

We're having a semester during a pandemic. Things are not normal, and I recognize that.

I want you to feel able to share your life experiences in classroom discussions and written work. I want you to trust that I will keep any information you share private. Please be aware that I do have a mandatory reporting responsibility related to my role as a faculty member. This means I am required to share information regarding sexual misconduct or information about a crime that may have occurred on campus with the university Title IX Coordinator.

Wellness

Supporting the mental health and well-being of students in my class is of high priority to me and Virginia Tech. If you are feeling overwhelmed academically, having trouble functioning, or are worried about a friend, please reach out to any of the following offices:

- Cook Counseling:

  o 540-231-6557 to schedule an appointment and/or 24/7 crisis support

  o ucc.vt.edu for more information

- Dean of Students Office:

  o 540 231-3787 for general advice

  o 540-231-6411 for after-hours crisis

  o dos.vt.edu for more information

- Hokie Wellness:

  o hokiewellness.vt.edu for more information about health and wellness workshops and consultations

- Services for Students with Disabilities (SSD)

  o 540-231-3788 or ssd.vt.edu for more information about accommodations and other disability-related supports

For a full listing of campus resources check out well-being.vt.edu .