 **JOUR 322: Data Journalism**

**2 units**

**Fall 2019 – Wednesdays – 6-7:40 p.m.**

**Section:** 21178D

**Location:** ANN 405

**Instructor: Sarah Favot Girardot**

**Office Hours:** By appointment

**Email:** sgirardo@usc.edu

**Phone:** 213-761-8825

**I. Course Description**

Proficiency with gathering, analyzing and visualizing data is essential in journalism today as commodity content becomes increasingly ineffective in both serving the public interest and engaging audiences.

This two-unit introduction to data journalism builds upon the reporting skills you developed in JOUR 207/307, Reporting and Writing I and II. Those courses focused on identifying and interviewing people as sources. This course introduces you to using data as a source, and “interviewing” datasets using quantitative analysis and data visualization tools.

In the past, a “data story” was a big investigation produced by a separate data journalist team that included statisticians and coders. However, good reporting always did include using numbers to compare, contrast and other put facts and opinions into perspective. And “[n]ow, the fear of numbers marks a reporter as one who can only do part of the job,” according to Sarah Cohen, New York Times data journalist and the author of *Numbers in the Newsroom*, the primary textbook that we’ll use. In this frenzied media climate, it’s more important than ever for journalists to gather and analyze data themselves rather than rely on a source’s summary and interpretation.

Thus, this course will start with building the fundamental skills you need to find and use data in basic news stories and beat reporting. You’ll then use those skills to become familiar with how to use the types of large government datasets that are used in investigative news stories that can take up to a year (or more) to complete. You will learn how to use Excel as a notebook, and Tableau to experiment with different types of data visualizations.

After completing this course, you’ll know whether you’d like to pursue more advanced study to prepare you for the many data journalism jobs available today.

**II. Course Learning Objectives**

1. Identify steps in the reporting process for:
   1. Using the right data in a basic news story.
   2. Identifying, gathering and exploring a dataset for an investigative story.
2. Use math to “interview” data to answer research questions about possible stories. Topics will include:
   1. Sub-totals and totals by group
   2. Fractions, rates, percents and per capita
   3. Absolute vs. relative change
   4. Averages, medians, modes
   5. Identifying outliers
3. Identify the datatypes and file formats available in a dataset available from government open data portals, and describe the differences between a “raw” dataset and a dataset that’s ready for exploratory data analysis and data visualization tools.
4. Present data in appropriate visual formats such as tables, charts and maps.
5. Summarize data and highlight the most important points using a combination of data visualizations and reader-friendly techniques such as rounding numbers and writing paragraphs that include fewer than eight digits.

**III. Assignments and Assessments**

1. **In-class work**

**In-class assignments:** There will be an in-class assignment that will be due at the end of the class period. In-class assignments will be guided exercises on Blackboard and will usually include an Excel worksheet or Tableau file. Some of the in-class assignments may be small group assignments.

**Quizzes:** There will usually be a five-minute quiz at the beginning of class. Unless otherwise indicated during the previous week, quizzes will consist of one or two multiple choice questions on AP Style.

**In-class assignments and quizzes cannot be made up.** We will drop the two lowest days from the in-class portion of your course grade, so you can miss two classes without jeopardizing your course grade.

1. **Homework**There will be two types of homework assignments.
   1. Suggested readings and exercises for the in-class work
   2. Writing assignments and/or Excel/Tableau exercises
2. **Midterm**

The midterm exam will assess your ability to use math to “interview," interpret and describe the summary statistics of a dataset. The exam will include multiple choice or similar format questions.

1. **Final**The final will assess your ability to decide what datasets to use for various types of stories, use math and data visualizations to interview data, and write a summary geared toward a general news audience. The exam will also include multiple choice or similar format questions.

**IV. Grading**

**a. Course grade breakdown**

|  |  |
| --- | --- |
| In-class work: Quizzes, assignments, appropriate use of devices | 30% (Your two lowest grades will be dropped.) |
| Homework assignments | 20% |
| Midterm | 25% |
| Final | 25% |
| **Total** | **100%** |

**b. Grading Scale**

Each assignment, quiz and story will be worth 100 points.

|  |  |  |
| --- | --- | --- |
| 95% to 100%: A | 80% to 83%: B- | 67% to 69%: D+ |
| 90% to 94%: A- | 77% to 79%: C+ | 64% to 66%: D |
| 87% to 89%: B+ | 74% to 76%: C | 60% to 63%: D- |
| 84% to 86%: B | 70% to 73%: C- | 0% to 59%: F |

**c. Assessment rubrics**

Each assessment will have its own rubric. Each rubric will include a component for grammar, punctuation, spelling, AP Style, number formatting and rounding.

The data visualization assessments will be graded based on the principles in ***The Wall Street Journal Guide to Information Graphics: The Dos & Don’ts of Presenting Data, Facts, and Figures****,* by Dona M. Wong.

Below are some common components for all assessments.

A

The data, calculations and data visualizations are correct and complete, and use Excel and Tableau formulas as directed. Data and visualizations are correctly formatted. Sources are correctly presented.

Text in sentences, paragraphs, spreadsheet columns and file names are clearly written, free of spelling and grammatical errors, and adhere to AP Style. It includes relevant data visualizations with explanatory text.

B

The assessment is missing a significant element.

C

The assessment is missing more than one significant element. It may have some unsubstantiated statements such as “Many people think…” or “Most of the group…”

D

The assessment uses only some of the correct data or calculations and is missing one or more significant elements.

F

The assessment has a material factual error. For example:

* It doesn’t use the correct data or calculations.
* It misspells a proper noun and/or doesn’t use the full and proper name for a dataset.
* It states a hypothesis as a fact.

The following are some other circumstances that would warrant a grade of “F” and potential USC/Annenberg disciplinary action:

* + - Emailing, texting or otherwise communicating in-class quiz or assignment questions and/or answers to others.
    - Fabricating data or making up quotes or other information.
    - Plagiarizing a script/article, part of a script/article or information from any source.

**V. Assignment Submission Policy**

Unless otherwise instructed, you must post all in-class, homework, midterm and final assessments on Blackboard. **No late assignments will be accepted.** In-class assignments may not be made-up, but we will be dropping the lowest two days from the in-class portion of your course grade.

The deadline is the day and time according to the Blackboard clock, i.e., you may not be able to upload an assignment into Blackboard after the deadline.

**VI. Required Readings and Course Materials**

1. **Investigative Reporters and Editors NICAR Course Pack**Available for $20 via the link posted on Blackboard.
2. ***Numbers in the Newsroom: Using Math and Statistics in News,*** *Second Edition,* by Sarah Cohen for Investigative Reporters and Editors, Inc., 2014, 134 pages. Available for $10 (digital version) or $25 (hard copy) via the IRE store at:

Digital: <https://www.ire.org/product/numbers-in-the-newsroom-using-math-and-statistics-in-news-second-edition-e-version>

Hard copy: <https://www.ire.org/product/numbers-in-the-newsroom-using-math-and-statistics-in-news-second-edition> (might be slow in the mail)

1. ***The Associated Press Stylebook 2018*** (digital or hard copy)

All assignments will be graded for AP Style. Expressing numbers in a consistent style is essential to communicating data accurately, clearly and credibly.

**Suggested reading**

***The Wall Street Journal Guide to Information Graphics: The Dos & Don’ts of Presenting Data, Facts, and Figures****,* by Dona M. Wong, W.W. Norton, 2013, 160 pages.

***The Data Journalism Handbook: How Journalists Can Use Data to Improve the News***, edited by Jonathan Gray, Liliana Bounegru and Lucy Chambers, O’Reilly Media, 2012, 220 pages. A digital version is free at <http://datajournalismhandbook.org/1.0/en/>**.**

**VII. Laptop requirements**

Hardware and software support is available from USC Annenberg Technical Services and Operations in ANN L103. Blackboard support is available 24/7 by calling 213-740-5555.

1. **Laptop**

You will need your laptop for every class. To install and use Excel and Tableau, you may need to update your operating system, close all other applications and/or clean up your hard drive.

1. **Software**
   1. **Microsoft Office 365 or Office 2016 (Word, Excel, PowerPoint) is** **required**. It is available for free to USC students at [itservices.usc.edu/officestudents](https://itservices.usc.edu/officestudents/).
   2. **Tableau Desktop 10.x is also required.**  I will be giving you the product key for the free academic version.

Minimum requirements for Tableau

PC: Microsoft Windows 7 or newer (32-bit or 64-bit); 2 GB RAM memory, 1.5 GB minimum free disk space

Mac: OSC 10.10 or newer; 1.5 GB minimum free disk space

**In-class technology device policy**

You are expected to be in your seat with your laptop logged into Blackboard when class begins. Using a device for anything other than in-class work will result in a deduction of one letter grade in the in-class assignment.

**VIII. Course Schedule – SUBJECT TO CHANGE**

**Unless otherwise stated, readings and homework assignments are due by the beginning of the next class.**

|  |  |  |
| --- | --- | --- |
|  | **Topics** | **Homework to be completed for the following week** |
| Week 1 **8/28** | Class overview | Purchase the NICAR Course Pack (see link on Blackboard) and *Numbers in the Newsroom* from the IRE website.  If needed, update your laptop to Microsoft Office 365 or Office 2016.  Readings NICAR Course Pack   * Basics and Sorting in Excel * Formulas (Excel cheat sheet)   Complete the interests survey on Blackboard.  Review AP Style for numbers. |
| Week 2 **9/4** | What is data?  Identifying summary vs. underlying data  Using Excel as a reporting tool  Quiz | Readings: See Blackboard.  *Numbers in the Newsroom:* We will be using the following pages as a reference throughout the semester.  Introduction, pgs. xi-xii  Chapter 1: What's a Number, pgs. 1-10  Chapter 2: A Newsroom Math Guide, pgs. 11-60  Fractions and Percentages – Conversion Chart, pg. 132  NICAR Course Pack   * Rates and ratios |
| Week 3 **9/11** | Rates and ratios  Quiz | Readings: See Blackboard.  NICAR Course Pack   * Filtering |
| Week 4 **9/18** | Filtering  Quiz | Readings: See Blackboard.  NICAR Course Pack   * Pivot tables |
| Week 5 **9/25** | Pivot tables  Converting fractions and percentages.  Start Homework Assignment #1  Quiz | Readings: See Blackboard. |
| Week 6 **10/2** | Using U.S. Census data  Quiz | Homework Assignment #1 is due on Oct. 9 |
| Week 7 **10/9** | Data from surveys, polls and focus groups  Quiz | Excel practice. |
| Week 8 **10/16** | Midterm review | Prepare for midterm. |
| Week 9 **10/23** | Midterm | Readings: See Blackboard. |
| Week 10 **10/30** | Government jurisdictions and open data portals. FOIA vs. local public records requests.  Evaluating sources of official data  Quiz |  |
| Week 11 **11/6** | Datatypes and cleaning up raw data  Quiz | Prepare for in-class work on datatypes and datasets.  NICAR Course Pack:  Importing |
| Week 12 **11/13** | Data visualization 1  Quiz | Install Tableau. Prepare for in-class work on data visualization.  Work on Homework Assignment #2 |
| Week 13 **11/20** | Data visualization 2  Quiz | Prepare for in-class work on data visualization.  Homework assignment #2 is due on Dec. 4. |
| **Week 14**  **11/27** | Thanksgiving Recess |  |
| Week 15 **12/4** | Final review |  |
| Final Exam Period **12/11, 7-9 p.m.** | Final exam |  |

**Add/Drop Dates**

**Friday, September 13:** Last day to register and add classes for Session 001

**Friday, September 13:** Last day to drop a class without a mark of “W,” except for Monday-only classes, and receive a refund for Session 001

**Tuesday, September 17**: Last day to drop a Monday-only class without a mark of “W” and receive a refund for Session 001

**Friday, October 11:** Last day to drop a course without a mark of “W” on the transcript for Session 001. [Please drop any course by the end of week three (or the 20 percent mark of the session) to avoid tuition charges.]

**Friday, October 11:** Last day to change pass/no pass to letter grade for Session 001. [All major and minor courses must be taken for a letter grade.]

**Friday, November 15:** Last day to drop a class with a mark of “W” for Session 001

**IX. Policies and Procedures**

**Communication**

I will reply to emails or calls within 48 hours.

**Internships**

The value of professional internships as part of the overall educational experience of our students has long been recognized by the School of Journalism. Accordingly, while internships are not required for successful completion of this course, any student enrolled in this course that undertakes and completes an approved, non-paid internship during this semester shall earn academic extra credit equal to one percent of the total available semester points for this course. To receive instructor approval, a student must request an internship letter from the Annenberg Career Development Office and bring it to the instructor to sign by the end of the third week of classes. The student must submit the signed letter to the media organization, along with the evaluation form provided by the Career Development Office. The form should be filled out by the intern supervisor and returned to the instructor at the end of the semester. No credit will be given if an evaluation form is not turned into the instructor by the last day of class. Note: The internship must be unpaid and can only be applied to one journalism class.

**Statement on Academic Conduct and Support Systems**

**a. Academic Conduct**

*Plagiarism*

Presenting someone else’s ideas as your own, either verbatim or recast in your own words - is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* (<https://policy.usc.edu/scampus-part-b/>). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct (<http://policy.usc.edu/scientific-misconduct/>).

*USC School of Journalism Policy on Academic Integrity*

The following is the USC Annenberg School of Journalism’s policy on academic integrity and repeated in the syllabus for every course in the school:

“Since its founding, the USC School of Journalism has maintained a commitment to the highest standards of ethical conduct and academic excellence. Any student found plagiarizing, fabricating, cheating on examinations, and/or purchasing papers or other assignments faces sanctions ranging from an ‘F’ on the assignment to dismissal from the School of Journalism. All academic integrity violations will be reported to the office of Student Judicial Affairs & Community Standards (SJACS), as per university policy, as well as journalism school administrators.”

In addition, it is assumed that the work you submit for this course is work you have produced entirely by yourself, and has not been previously produced by you for submission in another course or Learning Lab, without approval of the instructor.

**b. Support Systems**

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.* Provides overall safety to USC community. dps.usc.edu

*Annenberg Student Success Fund*

<https://annenberg.usc.edu/current-students/resources/additional-funding-resources>

The Annenberg Student Success Fund is a donor-funded financial aid account available to USC Annenberg undergraduate and graduate students for non-tuition expenses related to extra- and co-curricular programs and opportunities.

*Breaking Bread Program [undergraduate students only]*

<https://undergrad.usc.edu/faculty/bread/>

The Breaking Bread Program is designed to provide individual undergraduate students with an opportunity to meet and have scholarly discussions with faculty members outside of the normal classroom setting. Through this program, students and faculty enjoy good company and great conversation by literally “breaking bread” over a meal together and USC will pick up the tab! Your meal event can take place anywhere outside of the normal classroom setting. Your venue can be a restaurant or eatery on or off-campus.

**X. About Your Instructor**

Sarah Favot Girardot is a freelance journalist with bylines in Bloomberg, The Boston Globe and the Los Angeles Daily News. She was previously an investigative data reporter at a national education news site, The 74. Her areas of interest are politics, education, and courts. She has a B.A. in English and Communications from the University of Windsor in Windsor, Ontario, Canada and a master's degree in journalism from Boston University.