

## JOUR 322: Data Journalism 2 units

### Fall 2017

**Section:** 21176D  
Wednesdays, 2-3:40 p.m.

**Location:** ANN 408

**Instructor:** Dana Chinn, Lecturer

**Office:** ASC 227

**Office Hours:** By appointment

Tuesdays, 10-11:50 a.m. and 2-4 p.m.

Wednesdays, noon to 1:50 p.m.

Other days and times are available.

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### 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 may 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:
  - a. Using the right data in a basic news story.
  - b. 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:
  - a. Sub-totals and totals by group
  - b. Fractions, rates, percents and per capita
  - c. Absolute vs. relative change
  - d. Averages, medians, modes
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. Homework**

There will be two types of homework assignments.

- a. Video lectures and sample data you can use in Excel and Tableau to prepare you for the deadline-based in-class work.
- b. Blackboard tests with multiple choice (or similar format) questions, calculated numeric and/or short answer questions. You may also need to upload a screenshot and/or Excel or Tableau file.

For a two-unit class, USC expects you to spend four hours per week in out-of-class work. Please be sure to contact me if you're struggling with any of the concepts or with Excel and Tableau.

### **2. In-class work**

- a. Quizzes: There may be one or two quizzes each week at random times during the class period. Each quiz will consist of one multiple choice (or similar format) question, and you will have one minute to submit your answer on Blackboard.

- i. One quiz will usually be given within the first five minutes of class, and will be based on the homework or an example of a data journalism story that will be posted on Blackboard on Monday.
- ii. The second quiz, if any, will be given at some point during the class, and will be based on material covered in class.

b. In-class assignments: There will be at least one in-class assignment each week. These assignments must be submitted on Blackboard by the specified time within the class period. Some of the in-class assignments will be small group assignments. Each member of a group will receive the same grade.

**3. Midterm**

The midterm will be a timed test that will assess your ability to use math to “interview” and describe a government dataset. The test will include multiple choice and short answer questions based on calculations you will do in Excel.

**4. Final**

For the two-hour timed final, you will examine a government dataset in Excel, and then select and summarize the highlights using publication-ready text and data visualizations in Tableau.

**IV. Grading**

**a. Course grade breakdown**

<b>In-class work: Quizzes, assignments, appropriate use of devices</b>	<b>25%</b> (Your two lowest grades will be dropped.)
<b>Homework assignments</b>	<b>30%</b>
<b>Assignments 1 and 2: 5% each</b>	
<b>Assignments 3 and 4: 10% each</b>	
<b>Midterm</b>	<b>20%</b>
<b>Final</b>	<b>25%</b>
<b>Total</b>	<b>100%</b>

**b. Grading Scale**

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

A	95-100	B+	87-89	C+	77-79	D+	67-69
A-	90-94	B	83-86	C	73-76	D	63-66
		B-	80-82	C-	70-72	D-	60-62
						F	59 and below

**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:

- E-mailing, 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.**

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. As with broadcast deadlines, one second is too late. Be sure to allow enough time to upload the required file(s) and receive a confirmation notice from Blackboard by the deadline.

## VI. Required Readings

1. ***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) via the IRE website store at <https://store.ire.org/collections/frontpage/products/numbers-in-the-newsroom-using-math-and-statistics-in-news-second-edition-e-version>.

A hard-copy version is also available (\$25), and may be easier for you to use.

2. ***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/>.

3. ***The Associated Press Stylebook 2017*** (digital or hard copy)  
All written assignments will be graded for AP Style, which you learned in JOUR 207/307. There may also be some quizzes and homework assignments with AP Style questions.

The 2017 edition includes a new section on data journalism that may be referenced in some assignments.

### 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.

## 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.

## 2. Software

- a. **Microsoft 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).
- b. **Tableau Desktop 10.3 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 in case there is a quiz. I will be asking you to put away your devices during class until it's required for the in-class quizzes or assignments. Using a device for anything other than in-class work will result in a deduction of one letter grade in the in-class assignment for both you and your group.

## VIII. Course Schedule

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

	Topics	Homework
<b>Week 1</b> <b>8/23</b>	Class overview	Prepare for in-class work with Excel 2016.
<b>Week 2</b> <b>8/30</b>	What is data? Data in basic news stories	Homework assignment 1. Prepare for in-class work on the investigative story process.
<b>Week 3</b> <b>9/6</b>	Data in investigative stories	Homework assignment 2. Prepare for in-class work on government jurisdictions.
<b>Week 4</b> <b>9/13</b>	Newsroom math 1	Prepare for in-class work on U.S. Census data, percentages down and per capita.
<b>Week 5</b> <b>9/20</b>	Newsroom math 2	Prepare for in-class work on absolute vs. relative change.
<b>Week 6</b> <b>9/27</b>	Newsroom math 3	Prepare for in-class work on percentages across and other newsroom math.
<b>Week 7</b> <b>10/4</b>	Newsroom math 4	Prepare for midterm.

<b>Week 8</b> <b>10/11</b>	Midterm	Prepare for in-class work on government data.
<b>Week 9</b> <b>10/18</b>	Government jurisdictions and open data portals	Prepare for in-class work on datatypes and datasets.
<b>Week 10</b> <b>10/25</b>	Datatypes and cleaning up raw data 1	Homework assignment 3. Prepare for in-class work on Tableau and data visualizations.
<b>Week 11</b> <b>11/1</b>	Data visualization 1	Prepare for in-class work on Tables, bar and line charts.
<b>Week 12</b> <b>11/8</b>	Data visualization 2	Prepare for in-class work on maps.
<b>Week 13</b> <b>11/15</b>	Data visualization 3	Homework assignment 4.
<b>Week 14</b> <b>11/22</b>	No class – Thanksgiving break	Prepare for in-class work on writing with eight or fewer digits.
<b>Week 15</b> <b>11/28</b>	Summarizing data for news audiences	
<b>Final</b>	Friday, Dec. 8, 2-4 p.m.	

### Add/Drop Dates

**Friday, September 8:** Last day to register and add classes for Session 001

**Friday, September 8:** 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 12:** Last day to drop a Monday-only class without a mark of “W” and receive a refund for Session 001

**Friday, October 6:** 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 6:** 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 10:** Last day to drop a class with a mark of “W” for Session 001

### IX. Policies and Procedures

#### 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**

#### *Equity and Diversity*

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* (<http://equity.usc.edu/>) or to the *Department of Public Safety* (<http://dps.usc.edu/contact/report/>). This is important for the safety of the whole USC community. Another member of the university community - such as a friend, classmate, adviser, or faculty member - can help initiate the report, or can initiate the report on behalf of another person. The *Relationship and Sexual Violence Prevention and Services* (<https://engemannshc.usc.edu/rsvp/>) provides 24/7 confidential support, and the sexual assault resource center webpage (<https://sarc.usc.edu/>) describes reporting options and other resources.



### *Support with Scholarly Writing*

A number of USC's schools provide support for students who need help with scholarly writing. Check with your adviser or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* (<http://ali.usc.edu/>) which sponsors courses and workshops specifically for international graduate students.

*The Office of Disability Services and Programs* (<http://dsp.usc.edu/>) provides certification for students with disabilities and helps arrange the relevant accommodations.

Students requesting test-related accommodations will need to share and discuss their DSP recommended accommodation letter/s with their faculty and/or appropriate departmental contact person at least three weeks before the date the accommodations will be needed. Additional time may be needed for final exams. Reasonable exceptions will be considered during the first three weeks of the semester as well as for temporary injuries and for students recently diagnosed. Please note that a reasonable period of time is still required for DSP to review documentation and to make a determination whether a requested accommodation will be appropriate.

### *Stress Management*

Students are under a lot of pressure. If you start to feel overwhelmed, it is important that you reach out for help. A good place to start is the USC Student Counseling Services office at (213) 740-7711. The service is confidential, and there is no charge.

### *Emergency Information*

If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* (<http://emergency.usc.edu/>) will provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.

## **X. About Your Instructor**

Dana Chinn is a full-time faculty member who focuses on media metrics, data journalism, and the role of journalism in open data. Previously at USC Annenberg she directed the grant-funded USC Media Impact Project, various interdisciplinary programs, and the core curriculum. Her professional experience includes management positions at Gannett and the Los Angeles Times. She has a B.A. in journalism and an MBA from USC.