

**Spring 2018 – Wednesdays – 10-11:40 a.m.****Section:** 21169D**Location:** ANN 408**Instructor:** Dana Chinn**Office:** ASC 227**Office Hours:** By appointment**Email:** chinn@usc.edu**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. **In-class work**
  - a. Quizzes: There may be a quiz each week at the beginning of class. Each quiz will consist of multiple choice or similar format questions based on assigned readings and Excel or Tableau exercises.
  - b. In-class assignments: There will be an in-class assignment each week that will be guided exercises through concepts and/or Excel or Tableau. Some of the in-class assignments will be small group assignments. Each member of a group will receive the same grade. All in-class assignments will be due at the end of the class period.
2. **Homework**

There will be two types of homework assignments.

  - a. Suggested preparation for the in-class work with video lectures and sample data you can use in Excel and Tableau.
  - b. Writing assignments based on calculations and data visualizations in Excel and Tableau.

3. **Midterm**

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

4. **Final**

The final will be an explainer story will assess your ability to prepare a raw dataset, use math and data visualizations to interview it, and write a summary of the highlights of the data geared toward a general news audience.

**IV. Grading**

a. **Course grade breakdown**

<b>In-class work: Quizzes, assignments, appropriate use of devices</b>	<b>25%</b> (Your two lowest days will be dropped.)
<b>Homework assignments (3)</b>	<b>30%</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:

- 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 I 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. 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 and Course Materials

1. **Investigative Reporters and Editors NICAR Course Pack (\$20)**  
Available for \$20 via the IRE link that is 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) 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.

3. ***The Associated Press Stylebook 2017*** (digital or hard copy)  
All written assignments will be graded for AP Style.

### 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.

### 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.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 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 to be completed for the following week
<b>Week 1</b> <b>1/10</b>	Class overview	Reading: IRE Story Pack or tipsheet posted on Blackboard  IRE Course Pack <ul style="list-style-type: none"> <li>• Basics and Sorting in Excel</li> <li>• Formulas (Excel cheat sheet)</li> </ul>
<b>Week 2</b> <b>1/17</b>	What is a data journalism story? Using Excel as a reporting tool.	Reading: IRE Story Pack or tipsheet posted on Blackboard  <i>Numbers in the Newsroom:</i> 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  IRE Course Pack <ul style="list-style-type: none"> <li>• Rates and ratios</li> </ul>
<b>Week 3</b> <b>1/24</b>	Rates and ratios	Reading: IRE Story Pack or tipsheet posted on Blackboard  IRE Course Pack <ul style="list-style-type: none"> <li>• Filtering</li> </ul>

<b>Week 4</b> <b>1/31</b>	Filtering	Reading: IRE Story Pack or tipsheet posted on Blackboard  IRE Course Pack • Pivot tables
<b>Week 5</b> <b>2/7</b>	Pivot tables	Reading: IRE Story Pack or tipsheet posted on Blackboard
<b>Week 6</b> <b>2/14</b>	Using U.S. Census data Lookup tables	Homework assignment #1
<b>Week 7</b> <b>2/21</b>	Converting fractions and percentages and writing with eight digits or fewer	Prepare for midterm.
<b>Week 8</b> <b>2/28</b>	Midterm	IRE Course Pack • Importing
<b>Week 9</b> <b>3/7</b>	Government jurisdictions and open data portals	Prepare for in-class work on datatypes and datasets.
<b>Week of</b> <b>3/12</b>	SPRING BREAK – NO CLASS	
<b>Week 10</b> <b>3/21</b>	Datatypes and cleaning up raw data 1	Homework assignment #2 Prepare for in-class work on Tableau and data visualizations.
<b>Week 11</b> <b>3/28</b>	Data visualization 1	Prepare for in-class work on tables, bar and line charts.
<b>Week 12</b> <b>4/4</b>	Data visualization 2	Prepare for in-class work on scatter plots and box plots.
<b>Week 13</b> <b>4/11</b>	Data visualization 3	Prepare for in-class work on maps.
<b>Week 14</b> <b>4/18</b>	Data visualization 4 Final dataset overview	Homework assignment #3
<b>Week 15</b> <b>4/25</b>	Final workshop	
<b>Final</b>	Monday, May 7, 2-4 p.m.	

#### Add/Drop Dates

**Friday, January 26:** Last day to register and add classes for Session 001

**Friday, January 26:** Last day to drop a class without a mark of “W,” except for Monday-only classes, and receive a refund for Session 001

**Tuesday, January 30:** Last day to drop a Monday-only class without a mark of “W” and receive a refund for Session 001

**Friday, February 23:** 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, April 6:** 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**

*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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://dps.usc.edu)

**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.