Syllabus | Data-driven reporting, Fall 2016

This syllabus is for the Fall 2016 class data reporting classes at the University of Texas at Austin. Undergraduate and graduate sections are concurrent.

J 327D REPORTING WITH DATA	Day	Time	Location
07955	MW	6:00 - 7:30	CMA 4.152
J 395 DATA DRIVEN REPORTING	Day	Time	Location
08205	MW	6:00 - 7:30	CMA 4.152

Prerequisite
Graduate standing or upper-division standing and Journalism 310F (or 320D) with a grade of at least B-.

Description
This course will cover the basics of computer-assisted reporting, the use of electronic records for the basis of news reporting. Students will learn how to request data from public and governmental sources, to clean up and analyze that data using tools such as Excel and SQL, and use simple statistical models to accurately report based on the data.

Objectives
- Learn how to request and negotiate for electronic data from government agencies and other sources.
- Learn about and use common governmental data clearinghouses from local, state and national sources.
- Learn to clean up existing data and organize primary data to prepare for analysis.
- Learn how to use spreadsheet and database software to analyze data, including the use of relational databases.
- Learn to use patterns and "answers" from data to create data review reports, source lists and fully-reported stories.
- Learn how to use statistical models to define and contextualize data in news reporting.

Instructor
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Office hours directly following class or upon request. I may not check my university email during the day as I have a day job. If you need to reach me in a hurry, text me.

Resources

IRE Membership
I recommend but do not require that students join Investigative Reporters & Editors. Price is $25/year for students, but with that membership, you get, among other things:
- 1-year Premium subscription to CometDocs, a $70 value.
- 1-year Tableau Desktop license. This software typically costs $1000.

There are freemium versions of both software applications, but having the real deal helps.

Required texts
- Finding Stories with Spreadsheets by Paul Bradshaw (~$20). If you think you might be interested in scraping data from websites, consider the bundle that includes Scraping for Journalists. ($25)
- Numbers in the Newsroom by Sarah Cohen ($15 with discount code IREmember2016.)
- Data Journalism Handbook (Free).
- Other online readings, as assigned.

Software
In the 2014-2016 UT Catalog, the School of Journalism requires students to have a laptop capable of running Microsoft office and Adobe Creative Suite. You are encourage (implored, even) to use your own computer during this class. If you are limited to the lab, you will be at a disadvantage as you'll invariably have homework that requires a computer. All software used is available on both Macs & PCs, but know I will be using a Mac to demonstrate these skills.
- Microsoft Office. We'll be using Excel in class, which will be on the computers in the lab. But if you don't have Office on your personal computer already, you really ought to buy it from the UT Campus Computer Store. $20 for download version. You can probably do everything with free Libreoffice or Google Spreadsheets, but I'll be using Excel.
- We'll be using other software tools for assignments. These are typically free for the level we are using them or I have acquired educational licences.

Course outline
I will adjust this class based on progress, so the outline below is just a guide. See the course in Canvas for a full outline of assignments and readings.

Week	Description
1	Introduction
2	The data journalism workflow and process
3	Excel skills: Sort, filter, pivot tables, formulas and charting
4	Negotiating for data

5	Cleaning data: Open Refine, Regular Expressions. Graduate students: Transparent reporting through code
6	MySQL: Databases queries
7	MySQL: Joins and group by
8	Exploring data visually: Tableau
9	Exploring the Census
10	Communicating with data, including reporting project
11	Data cleaning labs: Command-line tools
12	Data cleaning labs: Reshaping data
13	Data analysis labs: Sampling models and data joins
14	Data analysis labs: More joins
15	Visualizations labs
16	Final project presentations

Grading

- (10%) **Participation***: Students are expected to come to class and participate in discussions and in-class assignments. This is a lab-centric course where skills are covered at a computer with instructor supervision, and each class builds upon the previous, so if you miss a class you fall behind. If you must miss a class, tell me in advance, or I can't help you. Attendance will taken and is a part of your grade.
- (30%) **Quizzes**: In-class quizzes will include material from assigned readings, lectures and work done in class.
- (30%) **Assignments**: Some assignments are done in class, but others require out-of-class time to complete.
- (30%) **Final project**: This project will include a fully-reported story with at least three sources based on pre-approved data sets obtained by the students. The process will include a pitch, analysis, data report and visualization. If you fail the final, you will not receive an A no matter the math on your other grades.

*By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Graduate credit
This class is cross-listed for graduate students. Those students are required to attend six hours of additional instruction time, and will have a data analysis project that is in addition to the other undergraduate assignments.

Quantitative reasoning flag

This course carries the [Quantitative Reasoning flag](). Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.

Grading scale

The grading scale for the course will be as follows:
- A: 94-100
- A-minus: 90-93.99
- B-plus: 87-89.99
- B: 84-86.99
- B-minus: 80-83.99
- C-plus: 77-79.99
- C: 74-76.99
- C-minus: 70-73.99
- Anything below a 70 is failing.

More important stuff

- Obey the [honor code]().
- Stay safe. [Campus security]() and [emergencies]().
- Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, http://ddce.utexas.edu/disability/about/
- More University [policies and places to get help]().