**Advanced Data and Mapping**

JOUR 480-0-20

Medill School of Journalism

Spring Quarter 2016 – starting March 29

Mondays 1:30 p.m. – 4:20 p.m.

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Office hours: By appointment

The Milwaukee Journal Sentinel cross-checked a list of day care providers with Wisconsin’s criminal courts database and discovered that hundreds of convicted criminals, including those who had physically abused children, are being licensed to run day care centers.

The Las Vegas Sun examined reports on the state-by-state distribution of controlled substances and found that Nevadans consume twice the national average of several prescription painkillers, making them among the most narcotic-addled populations in the country, with more people in Clark County dying of narcotics overdoses than of overdoses of illicit drugs or vehicle accidents.

The New York Times analyzed millions of records from water systems and regulators across the country and calculated that 20 percent of water treatment systems have violated key provisions of the Safe Drinking Water Act, causing many Americans to drink tap water that pose serious health risks. Some companies violated pollution laws more than 500,000 times with little or no punishment.

These are but three recent examples of the kind of reporting that can be accomplished with the aid of documents, electronic databases and the craft of investigative and computer-assisted reporting. Each year, more and more investigative and enterprise reporting projects are employing the techniques of CAR. Even daily beat reporting is increasingly relying on CAR skills.

Still, most reporters are not using any of the basic tools of CAR or employing basic investigative techniques in their work. Basic statistical analysis still eludes many journalists, and many newsrooms are not adept at acquiring, analyzing and developing stories from electronic datasets or even paper documents.

This course will teach students the basics of investigative and database reporting, starting with learning the software skills needed to use the main tools of CAR – spreadsheets and database managers. Students will also learn the basics of statistical analysis before moving on to developing the craft of turning data into compelling stories. Along the way, students will learn to rely less on hunches, theories and guesses and more on hard, quantifiable facts and rigorous analysis. Students will study and analyze real government databases and documents that have recently been used in actual stories.

**Course work**

Each student will report and produce an in-depth investigative story with a strong database analysis element. The possible stories will be presented on the first day of class. Students can decide if they want to produce a written story, a video or audio story, or a multimedia online story. Students will present their final projects during the last class. In addition to the final project, there will be weekly milestone homework assignments. These milestone assignments are designed to track your weekly progress on your final project. The course outline is subject to change, depending on the availability of guest speakers and other factors. All assignments must be handed in on time. Failure to hand in an assignment, or an assignment that doesn’t meet the above standards, will result in a lowered grade. Work rife with typos and grammatical errors will result in the assignment being rejected. Do not miss class.

All students must have spreadsheet software installed on their laptops and be familiar with the spreadsheet software they own. Specifically, students will be expected to know how to sort and filter data, and students should know how to enter simple formulas in a worksheet and perform basic mathematical calculations. This is not a software class, so students are expected to learn how to use their software on their own. Students who are not proficient in Microsoft Excel will be required to sign up at Lynda.com, a library of online tutorials designed to teach software skills.

Follow these easy steps to gain access to [Lynda.com](http://www.lynda.com/):

1. Log into [www.northwestern.edu/lynda](http://www.northwestern.edu/lynda) using your NetID and password.

2. You'll have one quick question to answer before gaining access to over 2,400 tutorials and courses.

3. If you have a Mac laptop, sign up for Microsoft Excel for Mac 2011 Essential Training. If you have a PC, sign up for Excel 2013 Essential Training.

**Grading**

There will be eight milestone assignments, each worth 10 points. The final assignment will be worth 120 points. All assignments are due at the beginning of class on Monday. Assignments may be emailed to the instructor.

**Grading scale**

100—93.34 A; 93.33—90 A-; 89.99—86.67 B+; 86.66—83.34 B; 83.33—80.00 B-; 79.99—76.67 C+; 76.66—73.34 C; 73.33—70.00 C-; anything lower is an F.

**Medill Integrity Code**

As members of the Medill community, all of our academic, professional, media, journalism and marketing communications work must meet the standards in this code.

For further information, please see the Northwestern University integrity policy:

<http://www.medill.northwestern.edu/student-life/academic-integrity-policy/>

**Special needs**

Northwestern University and Services for Students with Disabilities (SSD) are committed to providing a supportive and challenging environment for students with disabilities who choose to attend the university. Additionally, the university works to provide all students with disabilities a learning environment that affords them equal access and reasonable accommodation of their disabilities. Any student who has a documented disability and needs accommodations for classes and/or course work is requested to speak directly to the Office of Services for Students with Disabilities (SSD, 847-467-5530 ; ssd@northwestern.edu) and the instructor as early as possible in the quarter (preferably within the first two weeks of class). All discussions will remain confidential.

**Class schedule**

Because of the Easter holiday, our first class will be on Tuesday, March 29. Before our first class, complete these chapters on Lynda.com:

Essential Training for Excel 2013 (PC users): Chapter 1 (Getting Started with Excel), Chapter 2 (Entering Data) and Chapter 3 (Creating Formulas and Functions).

Excel for Mac 2011 Essential Training: Chapter 1 (Getting Started with Excel), Chapter 3 (Managing Worksheets, Cells and Cell Data) and Chapter 4 (Summarizing Data Using Formulas and Functions).

Week One

-- Introductions

-- Present and assign the investigative projects

-- Milestone assignment: Due next week. Do secondary source research on your investigative project. Find as many previously published articles or reports on your topic as possible. Put together a preliminary source list based on your research, and also include possible data sources for your project. Also, prepare questions to ask next week’s speaker.

And on Lynda.com, complete these chapters:

Essential Training for Excel 2013 (PC users): Chapter 7 (Introduction to Charting)

Excel for Mac 2011 Essential Training: Chapter 6 (Working with Charts)

Week Two

-- Guest speaker tbd

-- Lecture on descriptive statistics using spreadsheets

-- Review results of milestone assignment

--Homework

*--* Milestone assignment. Prepare detailed report on the data sources you will need for your project. Have the data’s schema, or layout, prepared. Also, prepare questions for next week’s speaker.

And on Lynda.com, complete these chapters:

Essential Training for Excel 2013 (PC users): Chapter 13 (PivotTables)

Excel for Mac 2011 Essential Training: Chapter 9 (Exploring PivotTable Reports)

Week Three

-- Guest speaker tbd

-- Lecture on data visualization

-- Review results of milestone assignment

*--* Milestone assignment. Write the initial outline of your final project. Also, prepare questions for next week’s speaker.

Week Four

-- Lecture on online research and data acquisition

-- Guest speaker tbd

*--* Milestone assignment. Continue refining outline of your final project. Also, prepare questions for next week’s speaker.

Week Five

-- Advanced statistics and methods used in investigative reporting

-- Guest speaker tbd

*--* Milestone assignment. Continue refining outline of your final project. Also, prepare questions for next week’s speaker.

Week Six

-- Spatial statistics and mapping

-- Guest speaker tbd

*--* Milestone assignment. Continue refining outline of your final project. Also, prepare questions for next week’s speaker.

Week Seven

-- Lecture on ethics

-- Guest speaker tbd

*--* Milestone assignment. Next week, turn in first draft of your project. Also, prepare questions for next week’s speaker.

Week Eight

-- Discuss final projects

-- Guest speaker tbd

*--* Milestone assignment. Next week, turn in second draft of your project.

Week Nine

-- Discuss final projects

Week Ten

-- Present final projects