

Spring 2021 DORNSIFE TOOLKIT
Images of Los Angeles--Visualizing Data
Tuesdays, 2:00 - 3:50pm



[Aerial photograph of Elysian Park, Solano Canyon, and Dodger Stadium, Los Angeles, ca. 1973](#)

Robin Dunitz Slides of Los Angeles Murals, 1925-200

Course no.: MDA 300X

Section: 42214

Units: 2

Instructors: Andrzej Rutkowski (arutkows@usc.edu) and Stacy Williams (stacyw@usc.edu)

Office Hours: By appointment

Andrzej Rutkowski is the Visualization Specialist at USC Libraries. Stacy Williams is Head of the Architecture and Fine Arts Library at USC.

Course Description

This course introduces students to data visualization with a focus on Los Angeles. Working closely with a selection of important historical and contemporary visualizations, students will develop skills for understanding, interpreting, and creating visualizations with current data. Students will be introduced to a variety of software, tools, and methods as well as artistic/hands-on practices such as, cognitive mapping, data visualization, artist books, and zines.

Learning Objectives:

- Know how to locate, interpret, understand, and use data about Los Angeles to tell a story
- Develop a firm understanding for data visualization methods and practices
- Become familiar with a variety of tools and software and be able to understand how each can be used uniquely for data visualization
- Be able to communicate and advocate for using data and creating visualizations ethically and critically

Grades and Expectations

This is a credit/no-credit course. Students who complete the assignments and participate in class discussions will receive credit.

Activities/Readings

There will be short readings or other activities assigned most weeks. Students are expected to do the activities/readings before class as they will help to facilitate and guide discussions. Students are encouraged to recommend other outside projects/readings for the class to consider.

Software and Tools

Software and tools are a critical component of this course. We will work with you in order to install any necessary software. We will discuss and/or use QGIS, ArcGIS, Tableau, Mapbox, CARTO, R, RStudio, Excel, Python, GoogleEarth, Palladio, GitHub, and other platforms to be determined. We will primarily focus on using free and open source tools for project work.

Final Project

This course is centered around the completion of a final project in which we will be working to create a series of visualizations on different topics about Los Angeles. The work will span several weeks and culminate in unique print publications that you will work on individually or in teams.

Schedule:

Week 1 - January 19th, 2021

Theme/Topic: Introductions

During our first week we will go over how the course is structured, including guidelines for class participation and engagement. We will walk through the syllabus and discuss the project work that we envision for the class.

Week 2: January 26th, 2020

Theme/Topic: Data Visualization . . . what is at stake?

During this session we will begin to answer why visualizing data is important. We will go over some basic visualization practices and discuss broader concepts and theory that we will then apply throughout the rest of the semester.

Activities/Readings to do before class:

- [Data for Black Lives Covid-19 Report](#) by Data for Black Lives
- [Feminist Data Principles](#) by Catherin D'Ignazio and Lauren Klein
- [Introduction and Chapter 1 Why Visualize: From Information to Wisdom from The Functional Art by Alberto Cairo](#) (pgs. xv-xxi + 5-22)
- [HOLC Redlining](#)
 - Explore the site and especially look at Los Angeles
- [Native Land Digital](#)
 - Especially look at the Territory Acknowledgement section

Week 3: February 2nd, 2021

Theme/Topic: Close readings of data visualizations

In this session we will look at Minard's visualization on Napoleon's 1812 March, John Snow's Cholera Map, Florence Nightingale's Coxcombs, and a selection of W.E.B du Bois' data visualizations for the 1900 Paris Exposition and discuss their style, how they communicate information, and their broader impact on the visualization community.

Activities/Readings:

- [Introduction](#) (Battle-Baptiste and Rusert), American Negro at Paris, 1900 (Morris), and The Cartography of W.E.B. du Bois's Color Line (Wilson) all from W.E.B Du Bois's Data Portraits Visualizing Black America
- [Tufte on Minard](#)

- Joanne Cheng -
<https://thoughtbot.com/blog/analyzing-minards-visualization-of-napoleons-1812-march>

Week 4: February 9th, 2021

Theme/Topic: Art / Interpretation of data / Ethics

This week we will explore the broader question of using data that is big/abstract and making it understandable and relatable through art. In particular we will look at how something as complex as the United States census can be humanized through interpreting and working with the data in a hands-on manner. The work of Mark Lombardi will also be discussed with a special emphasis on how he constructed his network analyses of complex relationships.

Readings:

- [Linda Vallejo: Brown Dot Project](#)
- [Mark Lombardi](#)
 - Learning from Lombardi:
https://medium.com/@ben_fry/learning-from-lombardi-a28032a7eb5
 - NPR Interview with curator of Lombardi exhibition:
<https://www.npr.org/templates/story/story.php?storyId=1487185>

Week 5: February 16th, 2021

Theme/Topic: Art / Interpretation of data / Ethics

The topic this week is looking at how we can use everyday objects to visualize data. How does the everyday infuse meaning to how we look at and work with data?

Readings:

- [Richard Ibgby & Marilou Lemmens: The Prophets, Pictures for an Exhibition](#)
- [Tom Kiefer: El Sueño Americano / The American Dream](#)
- [AIDS Memorial Quilt](#): History
 - [Interactive AIDS Quilt](#)

Week 6: February 23rd, 2021

Theme/Topic: Art / Interpretation of data / Ethics

This week we will discuss the concept of deficit mapping/data and look at alternatives to how you can gather and use data for talking about places and people.

Readings:

- [Happy Data](#)
- [Happy Mapping](#)
- [Willowbrook Workbook](#)
- [Willowbrook Workbook Results](#)

Week 7: March 2nd, 2021

Theme/Topic: Exploring Los Angeles data

This week will focus on doing a survey of historical and contemporary data sources for and about Los Angeles. We will look at archives, agencies, portals, and other organizations that collect and share Los Angeles data. This week students will be expected to start thinking about identifying potential datasets for project work.

- Archives
- Maps
- Water
- Population
- Homelessness
- Transportation

Week 8: March 9th, 2021

Theme/Topic: Tools from Proprietary to Open Source

This week we will discuss different tools, languages, and software for data visualization. In particular we will focus on open source vs. proprietary tools and the impact that has on data visualization work and access to data. After an overview we will do some hands-on work with specific tools/software that will be in part informed by student interests and dataset choices.

Activities/Reading:

[GIS: Critical Look at the Commercialization of Public Information](#) by Safiya Noble

[How did they make that, blog post by Miriam Posner](#)

Assignment Due: 1 page provisional report in which you introduce a question and how it might be answered or explored through a specific dataset. (500 words)

Week 9: March 16th, 2021

Theme/Topic: Map Data using QGIS, Tableau, Google Earth, and/or Google Slides/Adobe

This week will be hands-on with tools and data, with a focus on data preparation. We will work together to develop questions that could be explored using a dataset. You will then select a tool(s) that can be used to visualize the data and explore your question(s).

Week 10: March 23rd, 2021 - WELLNESS DAY - NO CLASS

Continue hands-on work and optional check-in via email or online

Week 11: March 30th, 2021

Theme/Topic: From Digital Map/Visualization to Zine/Artist Book

This week we will discuss how to take your digital visualization and begin to translate it into an analog form. We will talk about how to break down your visualization and communicate a narrative story that will contextualize and humanize your data. A basic 8-page zine template and an accordion style artist book template will be introduced as potential analog vehicles for your data story.

Week 12: April 6th, 2021

Theme/Topic: From Map to Zine/Artist Book

Continue working on Zines/Artist book

Week 13: April 13th, 2021

Theme/Topic: Final presentations and Digital Project

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* (<https://equity.usc.edu/who-we-are/>). This is important for the safety of the whole USC community. Another member of the university community—such as a friend, classmate, advisor, or faculty member—can help initiate the report, or can initiate the report on behalf of another person. The USC Title X Office (<https://sarc.usc.edu/>) describes reporting options and other resources.

The Office of Disability Services and Programs:

<https://dsp.usc.edu> provides certification for students with disabilities and helps arrange the relevant accommodations. Please be sure that the certification is delivered to us as early in the semester as possible. DSP Contact information:

- Disability Services and Programs
 - DSPFrontDesk@usc.edu
 - (213) 740-0776
- Disability Services and Programs Testing Center
 - DSPTestingServices@usc.edu
 - (213) 821-9620

Emergency Information:

If an officially declared emergency occurs *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call <https://dps.usc.edu/> Non-emergency assistance or information.

COVID-19 Resource Center: <https://coronavirus.usc.edu> Information, updates and support for the USC community.

Academic Conduct:

Presenting someone else's ideas as your own, without citing, is plagiarism. This is a serious academic offense with consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/scampus-part-b/>.

Support Systems:

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

engemannshc.usc.edu/counseling

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

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

<https://suicidepreventionlifeline.org/>

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.