Social Science 012Y
Data Visualization in the Social Sciences
University of California, Davis
Spring 2016

Class Hours:
> Lab: Wednesday 5:10 – 6:30pm, 73 Hutchison
> Lecture: Friday 10:00 – 11:50am, 184 Young

Required Text:
Wong, D. (2014) Wall Street Journal Guide to Information Graphics, Norton.

Description and Learning Objectives: Introduction to quantitative data uses across social sciences, including organizing data, describing data sets, graphing, and visual reasoning. Examples will be drawn from Communications, Political Science, Psychology, Sociology, and other disciplines.
In this course, students will learn to…
* read and understand quantitative data as presented in empirical reports in the Social Sciences.
* understand the decisions around appropriate data management and summarization
* produce spreadsheets demonstrating appropriate data management and summarization using current software
* understand the decisions around appropriate presentation of data
* produce graphs, figures, tables and using current software
* describe patterns in data, draw and justify conclusions from data

Overview of Course Structure

This is a hybrid course that makes extensive use of both online and live teaching. A 4-unit course assumes approximately 12 hours of work each week. Each week, you will
1. spend 5 hours, on your own time, watching video tutorials, video lectures, exploring data sets, producing data summaries and graphs and taking online quizzes.
2. attend a 1:20-hour live laboratory section
3. attend a 2-hour live lecture section
4. remaining 4 hours per week to be spent on readings or additional practice or study

1. Online Tutorials, Lectures, and Exercises (Introduce and Explore)

To gain hands-on skills and an initial understanding of the concepts, each unit is introduced through online tutorials and lectures. You will work through these tutorials and the supporting lecture material at your own pace on your own schedule.

2. Laboratory (Demonstrate, Question and Explain)

Students will meet with a teaching assistant for 1:20 per week, in a computer lab. These small-group (25) meetings will be opportunities to have a topic more fully explained, to have questions answered and to actively engage with the material.

Most lab sessions will include an opportunity for students to address any questions while reviewing and consolidating the current material and working in teams to take on further challenges. Most lab sessions will include a 25-minute hands-on test.

3. Live Lecture (Extend and Apply)

Each week you will attend a 2-hour live lecture. These lectures will focus on applying the module content to real world examples and extending your understanding of the nuances of the topic.

4. Theory Challenges (Thinking Like a Social Scientist)

During the quarter you will be presented with multiple opportunities to tackle a data set and draw conclusions about competing theories. You will apply your data managing, summarizing and visualizing skills to interpret the data and decide which theory is supported. You will submit a written report on each of these Theory Challenges. You will submit a recorded presentation on one of these. You will engage in peer-review of the recorded presentations.

5. Exams
There will be 2 midterms and an optional, cumulative final exam.

Assignment	**Percent of grade**
Exams:	30% (drop lowest)
Lab Tests:	30% (drop lowest)
Theory Challenge:	30%
(Write-Ups, Presentation, and Peer Review)	
Participation:	10%

DSS 012Y – Spring Quarter 2016
Topic and Assignment Schedule

Week of		Topic	Online Assignments	Assessments
1	Mar 28	Introduction		
2	Apr 4	Introduction to Categorical Data	Tutorial 0 + 1	4/6: LabTest1
3	Apr 11	Multivariate Categorical Data	Tutorial 2	4/13: LabTest2
4	Apr 18	Multivariate Categorical Data II	Tutorial 3	4/20: LabTest3
5	Apr 25	Theory Challenge I		4/27: Draft TC1 **4/29: Midterm Exam**
6	May 2	Introduction to Continuous Data	Tutorial 4	5/2: Theory Challenge 5/4: LabTest4
7	May 9	Distributions and Sampling	Tutorial 5	5/11: LabTest5
8	May 16	Group Comparisons	Tutorial 6	5/18: LabTest6
9	May 23	Theory Challenge II		5/25: Draft TC2
10	May 30	Correlation Coefficients	Tutorial 7	5/30: Theory Challenge 6/1: LabTest7 **6/3: Midterm Exam** 6/3: Peer Review
	Exam Week	**Optional Final Exam**		in the usual lecture hall