**STS 112: Visualizing Society with Data**
Winter 2021 — Tuesdays 9:30-10:50 (Zoom)
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Data visualization is an important mode of analysis and communication today, particularly for investigating and conveying information about society and social change. This course will focus on using the R statistical programming language to analyze and visualize social change over time using individual-level data from the United States Census (1870-2010). Through this practice, you will become very familiar with a large and versatile source of data (the Integrated Public Use Microdata Series) and learn critical approaches to analyzing and visualizing data that you can apply to other data sets as well. We will examine why and how the data were produced, what material effect they had and continue to have on the world, what information we can glean through their analysis, and how to visually represent various kinds of historical change, such as race formation, internal and international migration, and industrialization.

STS 112 fulfills the **Domestic Diversity** requirement. We will analyze census data to understand the historical processes involved in producing and challenging social inequality along the axes of race, gender, class, and sexuality. Most assignments will require that you grapple with at least one of these dimensions of diversity.

STS 112 also fulfills the **Quantitative Literacy** requirement. You will gain competency and comfort in working with numerical data and evaluating arguments made on the basis of numerical data. By using historical data to explore social change, you will learn to generate and communicate arguments about numerical data collected to investigate U.S. society. Each week we will focus on a different type of data visualization.

**Format:** Each week you will complete the following activities
- Watch and comment on one or more content videos and read and comment on one or more articles (using Perusall) — 2 points
- Watch a coding video, following along in RStudio (weekly notebook) — 3 points
- Attend class, where we will get started on the week's lab and answer any questions you have about the week's content (on Zoom, Tuesdays 10:30-11:50)
- Compete a lab(using R and RStudio) — 2 points
- Complete a quiz (open book, not timed) — 3 points

We will meet on Zoom on Tuesdays only. Perusall assignments and weekly notebooks must be completed **before class** each Tuesday. Weekly labs and quizzes are due **Thursdays at 1pm**. Late Perusall assignments and notebooks will not be accepted. You may request an extension of up to three days on any given lab or quiz by filling out the extension form on Canvas **at least 48 hours before the assignment is due**. Assignments submitted after the extension, or submitted late without an extension, will not be graded.

**Grading:** You can earn a total of 10 points per week for a total of 100 points for the quarter. Final grades will be assigned as follows: A+ [100, 97), A [97, 93), A- [93, 90), B+ [90, 87), B [87, 83), B- [83, 80), C+ [80, 77), C [77, 73), C- [73, 70), D+ [70, 67), D[67, 63), D- [63, 60), F [60, 0].

**Materials:** You do not need to purchase any books or other materials for this class. We will be working in R and RStudio. These are free to download and install on your computer. If you do not have a computer on which you can install software, you can use R and RStudio in UCD's virtual lab.

**Accommodations:** I will work with the Student Disability Center (sdc.ucdavis.edu) to make accommodations for documented disabilities. All requests must be initiated through the SDC. If you think you might have a disability or medical or psychological condition that affects your learning, please do not hesitate to contact the SDC for evaluation.

**Zoom Etiquette:** During synchronous sessions, I expect you to have your camera on to best simulate a classroom environment. Please keep yourself muted unless you are speaking and use Zoom's hand-raising functionality to indicate when you would like to speak. You may type comments into the chat whenever you like, and I will address them as soon as I am able. Please rename yourself in Zoom with the name you would like to be called (first name only is fine, though please include something distinguishing if you have the same name as someone else in class) and your preferred pronouns. Please refer to everyone using their preferred names and pronouns. You may at times need to use other windows on your computer to participate in class-related activities, but everything else should be closed and your full attention should be on the class. Class sessions will be recorded, but these recordings should only be watched by class members and should not be shared with anyone else. Anything said or shown on Zoom stays on Zoom.

**Diversity, Equity, and Inclusion:** It is my intent that students from all backgrounds and with all perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of all types of diversity. Your suggestions are encouraged and appreciated. Please let me know how I might improve the effectiveness of the course for you personally or for other students or student groups. This course will involve conversations about historical and contemporary constructions of gender, race, and sexuality. These conversations may be difficult, but the virtual classroom is a safe place to discuss and write about these issues. *Scholarly disagreements are allowed and debate is encouraged, but your comments should refer to course materials, not another person.* I expect you to be courteous to your classmates and their ideas, to allow them to speak, and to listen to them carefully. If you think a reading or discussion may be triggering to you personally, please discuss with me in advance how we can manage the situation to protect your physical and emotional safety.

**Meeting and Communication:** I will hold **weekly office hours on Tuesdays at 11-12 and Thursdays at 9-10**. Please schedule these meetings in advance at calendly.com/ekmerchant, and please use the Thursday times only if you absolutely cannot meet on Tuesdays. You may contact me through Canvas about anything course-related at any time. For other matters (e.g. recommendation letters), please email me at ekmerchant@ucdavis.edu. I will check and respond to messages once per day on Monday-Friday, so please plan accordingly.

**Academic Integrity:** As in all courses at UC Davis, you will be held to the University's Code of Academic Conduct (sja.ucdavis.edu/files/cac.pdf), which prohibits all forms of academic misconduct, from outright cheating or plagiarism to inadequate citation. You must acknowledge this Code of Academic Conduct for each course in which you are registered on the Academic Participation website (participate.ucdavis.edu). All work that you submit for this class must be your own and must not have been submitted for a grade in any other class without prior approval from myself and the instructor of the other class. I will report all cases of suspected misconduct to the Office of Student Judicial Affairs (sja.ucdavis.edu). We will discuss proper citation practices in class. Please do not hesitate to ask *in advance* if you are unsure whether something you plan to do violates the code.

**Schedule**

| Week | Content | Lab |
|------|---------|-----|
| 1 | Introduction to the US Census | Introduction to R |
| 2 | Introduction to IPUMS | Working with IPUMS data |
| 3 | Racial formation in the United States | Tables |
| 4 | Industrial revolutions | Column graphs |
| 5 | Gender and work | Line graphs |
| 6 | European and Asian immigration and restriction | Population pyramids |
| 7 | The Great Migration | Choropleth maps |
| 8 | Civil rights and race statistics | Boxplots |
| 9 | Families in the U.S. Census | Heatmaps |
| 10 | Nontraditional families | Everything! |