

S110
Charts, Graphs, and Tables
Spring 2017
Tuesday/Thursday
4:00PM – 5:15PM

Course Information

Professor: Steve Benard

Office: Ballantine Hall 750

Office Hours: Thursdays from 1:30-3:30PM or by appointment

Office Phone: 812-856-7418

Email: sbenard@indiana.edu (Please put “S110” first in the subject line)

Course webpage: Available on Canvas (<http://canvas.iu.edu>)

Graduate Assistant: Katie Johnson

GA Email Address: johnkale@umail.iu.edu

GA Office: Social Research 317 (Corner of Third & Hawthorne, about a block from Ballantine, S7 on the campus map)

GA Office Hours: Mondays from 12-2PM or by appointment

Class Location: BH 103

Final Exam: No final exam, final paper due Thursday, 5/4, at 4:00PM

Course Description & Learning Objectives

On a daily basis, we are presented with information about the world. We might hear that 51% of Americans support a particular political candidate, that Americans trust their neighbors less now than in the 1950s, or that people who watch more TV are less involved in their communities. Where does this information come from? What does it really tell us? And when we collect and present information for school, work, or other groups, how can we do a good job? To help you answer these questions, this course provides an introduction to how sociologists think about, collect, display, and understand information about the world. The topics covered include the basics of research methods, sampling, statistics, and reading and designing charts, graphs, and tables. These topics are illustrated using data and examples from social science research.

Readings and Lectures

To do well in this course, it is important that you attend lectures, take careful notes, and complete all of the readings. Some material covered in the readings will not be discussed in lecture, and some material discussed in the lectures will not be covered in the readings. You are responsible for all material covered in the readings and in the lectures – both will be covered on tests and assignments. If you miss class, it is your responsibility to get the notes from a classmate. I will make the slides from class available online each day after class, in the “Files” section of the Canvas page for the class. *You should think of these slides as an outline, not as the entire content of the class. They are a supplement to your own notes and readings, not a replacement for them.* I am happy to answer your questions about the material in office hours, but I do not re-deliver

past lectures during office hours. I will do my best to keep the classes fun, interesting, and informative.

Required Texts

There are two required texts, listed below. I have done my best to keep the costs of the course as low as possible, and if you take advantage of the Wells library reserve (see below), you don't need to buy anything.

The Pearson textbook ("Statistical Persuasion") is available as an e-book through VitalSource. If you would like to get a head start, the first chapter is available as a PDF in the "Week 2" folder in the "Files" section on Canvas. I am using this ebook format because it is much less expensive than the paper version (\$45 for the ebook vs. \$142 for a new paper copy). To keep the price low, the ebook only includes chapters that are actually assigned in the course. The book can be purchased at this link:

<https://www.vitalsource.com/products/custom-indiana-university-soc-110-charts-graphs-sagecustom-v9781506385457>

The Putnam book ("Bowling Alone") is available at the IU bookstore. You can usually find used copies through online booksellers such as Amazon. If you prefer not to buy the required readings, they are on reserve in Wells Library; you can take them out for four hours at a time.

- Pearson, Robert W. 2011. *Statistical Persuasion: How to Collect, Analyze, and Present Data...Accurately, Honestly, and Persuasively*. Thousand Oaks: Sage.
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Calculator: you will need a non-graphing with a square root function ($\sqrt{\quad}$) for this course. Smartphones or other devices are not allowed during exams. You can find these at the bookstore for about \$5.

All additional required readings will be available on the Canvas website (<http://canvas.iu.edu>), posted in the "Resources" section.

Assignments and Grading

In this course, your grade will be based on in-class exams and exercises, and outside homework, essays, and research. The course includes a total of 200 points. There will be two opportunities for extra credit.

Attendance and preparation (20 points, 10% of your grade): The course will include a number of in-class exercises related to the material for the day. These are designed to help you practice the concepts we are learning, and to help me see how well everyone is progressing through the material. We will drop one missed exercise. In addition, anti-participatory behavior (sleeping, reading magazines, doing work for another class, texting, surfing the internet, talking out of turn, letting your cell phone ring, etc.) will reduce your participation grade.

Quizzes (80 points, 40% of your grade): There will be four quizzes, worth 20 points each. All exams are closed-book, and use of outside materials and electronic devices (other than a non-graphing calculator) during the exam is prohibited. Any use of electronic devices during the exam will be treated as a violation of the honor code (see “Academic Integrity” section, below). It is important to be on time for all exams. Once the first person to finish has turned in an exam, no one arriving late will be allowed to begin. No make-ups will be given, except in extreme, and documented, situations. Exam and assignment dates are non-negotiable, so be sure to consider the exam and assignment dates when making your travel plans.

Short assignments (60 points total, 30% of your grade): The short assignments include three homework assignments, one short paper, an Excel-based assignment, and one survey data collection project. We will discuss these in class.

Research paper (40 points, 20% of your grade): The course includes one research paper that will give you a chance to put what you are learning into practice. We will discuss the paper in class.

Extra Credit: There will be two opportunities for extra credit. We will discuss both opportunities in class. The first opportunity is a reflection essay on the Putnam book, worth 10 points (a bonus of 5%). For the second opportunity (2 points or a 1% bonus), you can choose to either participate in an approved research study by sociology graduate student, or complete an alternative assignment of similar length (you must choose either the research study or the alternative assignment, not both). All extra credit must be completed by Friday, April 21st.

Summary of Assignments and Due Dates

Assignment	Value	Due
In Class		
In-class exercises	20 points	On a regular basis, in class
Quiz 1	20 points	2/2
Quiz 2	20 points	2/23
Quiz 3	20 points	3/30
Quiz 4	20 points	4/20
Outside HW & Assignments		
Research methods HW	10 points	1/26
Describing data HW	10 points	2/16
Survey data	10 points	3/23
Survey reflection paper	10 points	3/23
Sampling and inference HW	10 points	4/18
Table workshop assignment	10 points	4/18
Final research paper	40 points	5/4

Grading

Below is a breakdown of how many points you will need to earn to receive a given grade.

A+: 194-200 points
A: 187-193 points
A-: 180-186 points
B+: 173-179 points
B: 167-172 points
B-: 160-166 points
C+: 153-159 points
C: 147-152 points
C-: 140-146 points
D+: 133-139 points
D: 127-132 points
D-: 120-126 points
F: 119 points and below

Course Policies

Academic Integrity: You are expected to be familiar with and adhere to Indiana University's Code of Student Rights, Responsibilities, and Conduct, available here:

<http://studentcode.iu.edu/>

Standards of academic integrity will be strictly enforced. Behaving dishonestly (including plagiarism, cheating on exams, and other violations of the code) in order to get a better grade is unfair to the vast majority of students who behave honestly. Any violations of the code will result in, at a minimum, a grade of 0 on the exam or assignment, and may also result in further penalties. Forging any type of documentation or excuse (e.g., letters from doctors or regarding family emergencies) will be penalized. In addition, as required by Indiana University policy, academic misconduct will be reported in writing to the Dean of Students, the College of Arts and Sciences, and the College or School in which you are enrolled.

Getting Help: Your GA and I look forward to helping you get the most out of this course. We are available to discuss the class with you on a walk-in basis during office hours, and we are also happy to meet with you by appointment. If you would like to ask me question about the course material, I prefer that you talk to me in person rather than by email (your GA may have different preferences regarding the use of email). This is a more effective way to learn the ideas covered in this class, and it will help me get to know you better. While this is a fairly large class, I hope to have the chance to get to know all of you at some point during the semester.

Respect for others: In the course of class discussion, it is natural that some people will have different perspectives. It is normal for people to disagree, but it is important to do it in a mature and thoughtful manner. You are expected to be polite and respectful to all members of the class at all times.

Accommodations: I am available to discuss appropriate academic accommodations that may be required for students with special needs. Requests for academic accommodations should include

university documentation and be made during the first three weeks of the semester, except in unusual circumstances, so that arrangements can be made.

You may wish to visit the website for IU's Office of Disability Services:

<https://studentaffairs.indiana.edu/disability-services-students/index.shtml>

Similarly, if you require special accommodation for athletic, performing arts, or similar commitments, or for religious holidays, you must inform me and provide documentation within the first three weeks of the semester.

Student Advocate's Office: If you experience a personal issue that affects your academic work, and you do not feel comfortable discussing it with your instructors, I encourage you to visit the Student Advocate's Office.

<https://studentaffairs.indiana.edu/student-advocates/>

Late Assignments: Assignments between 1-5 days late will be accepted with a 10% penalty per day late. Assignments between 6 days and 2 weeks late will be accepted with a 50% late penalty. I do not accept assignments more than 2 weeks late or after the last day of class. The final paper must be turned in on time, because final grades are due shortly after the due date.

Course Outline

Week 1: What do sociologists do? Jan. 10-12

Class 1: Introduction to the course
(No Reading Due)

Class 2: Asking questions in sociology

Reading due: C. Wright Mills, *The Sociological Imagination*, Chapter 1: "The Promise"
(OnCourse)
Putnam, Chapter 1, "Thinking about social change in America"

Week 2: Where does our information come from? Jan. 17-19

Class 3: Research methods, part 1

Reading due: Pearson chapter 2, "Research Design and Data Collection"
Schuman, "Sense and nonsense about surveys" (OnCourse)

Class 4: Research methods, part 2

Reading due: Putnam, Chapter 2 ("Political Participation"), & Chapter 3 ("Civic Participation")

Week 3: How do we know what we are measuring?**Jan. 24-26**

Class 5: Measurement, part 1

Reading due: Pearson chapter 3, “Measurement”

Class 6: Measurement, part 2

Reading due: Putnam, Chapter 4, “Religious Participation”*Assignment due:* Research methods HW

Week 4: Survey Workshop/Quiz #1**Jan. 31-Feb. 2**

Class 7: Survey Project Workshop

Reading due: Sander and Thomas, “Still Bowling Alone?”

Class 8: Quiz #1

Week 5: Describing data, part 1**Feb. 7-9**

Class 9: Means, medians, and modes

Reading due: Pearson, Chapter 5, “Statistics as Description”, pp. 103-109.

Wheelan, “Descriptive Statistics: Who was the best baseball player of all time?” (OnCourse)

Class 10: Applying measures of central tendency

Reading due: Putnam, Chapter 5, “Connections in the Workplace”

Week 6: Describing data, part 2**Feb. 14-16**

Class 11: Central tendency/Variance and distributions

Reading due: Pearson, Chapter 5, “Statistics as Description”, pp. 109-122

Class 12: Variance and distributions

Reading due: Putnam, Chapter 6, “Informal Social Connections”

Huff, “Much ado about practically nothing” (OnCourse)

Assignment due: Describing data HW

Week 7: Describing data, part 3/Quiz #2**Feb. 21-23**

Class 13: Variance and distributions

Reading due: Ellison et al., “The Benefits of Facebook ‘Friends’” (OnCourse)Class 14: Quiz #2

Week 8: Survey training**Feb. 28-Mar. 1**

Class 15: Survey training day

Reading due: Fowler & Mangione, “Standardized Interviewing Techniques”
(OnCourse)

Class 16: No Class. Conduct at least one interview in this time and be prepared to talk about your experience in class on Tuesday.

Week 9: Tables**Mar. 7-9**

Class 17: Tables, part 1

Reading due: Pearson, Chapter 7, “Percentages and Contingency Tables”

Class 18: Tables, part 2

Reading due: Putnam, Chapter 11, “Pressures of Time and Money”

Week 10: Spring Break**Mar. 14-16**

NO CLASS – SPRING BREAK

Week 11: Excel Workshop/Tables pt. 3**Mar. 21-23****EXCEL WORKSHOPS WILL BE HELD IN A COMPUTER LAB TBA**

Class 19: Excel workshop 1

Reading due: None

Class 20: Tables, Part 3

Reading due: None

Assignment due: Survey data & survey reflection paper

Week 12: Excel Workshop/Quiz #3**March 28-30**

Class 21: Excel workshop 2

Reading due: None

Class 22: Quiz #3

Week 13: Charts & Graphs**April 4-6**

Class 23: Charts & graphs, part 1

Reading due: Pearson, Chapter 6, “Charts and Graphs”
Putnam, Chapter 12, “Mobility and Sprawl”

Class 24: Charts & graphs, part 2

Reading due: Putnam, Chapter 13, "Technology and Mass Media"

Week 14: Sampling & Inference

April 11-13

Class 25: Sampling & Inference Overview

Reading due: Pearson, Chapter 8, "Samples and Statistical Inference"

Class 26: No Class

Week 15: Table Workshop/Quiz #4

April 18-20

Class 27: Table Workshop

Reading due: None

Assignments due: Table workshop assignment
Sampling and inference HW

Class 28: Quiz #4

Week 16: Wrapping up

April 25- 27

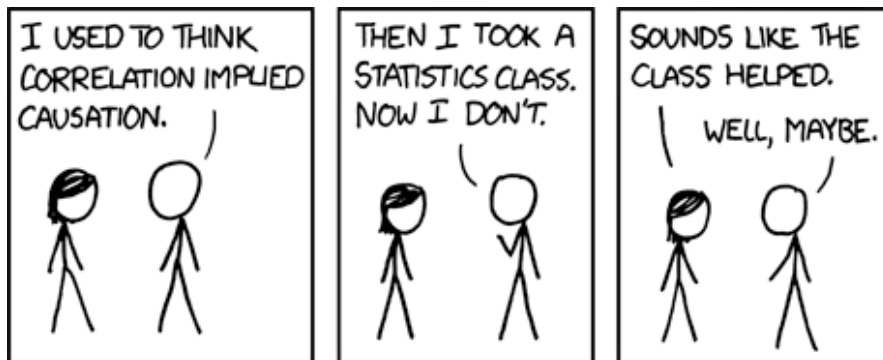
Class 29: Writing and presenting

Reading due: Pearson, Chapter 14, "Presenting persuasive statistical analyses"

Class 30: Wrapping up: Assessing social capital in America

Reading due: Putnam, Chapter 23, "Lessons of History: The Gilded Age and the Progressive Era"
Putnam, Chapter 24, "Towards an Agenda for Social Capitalists"

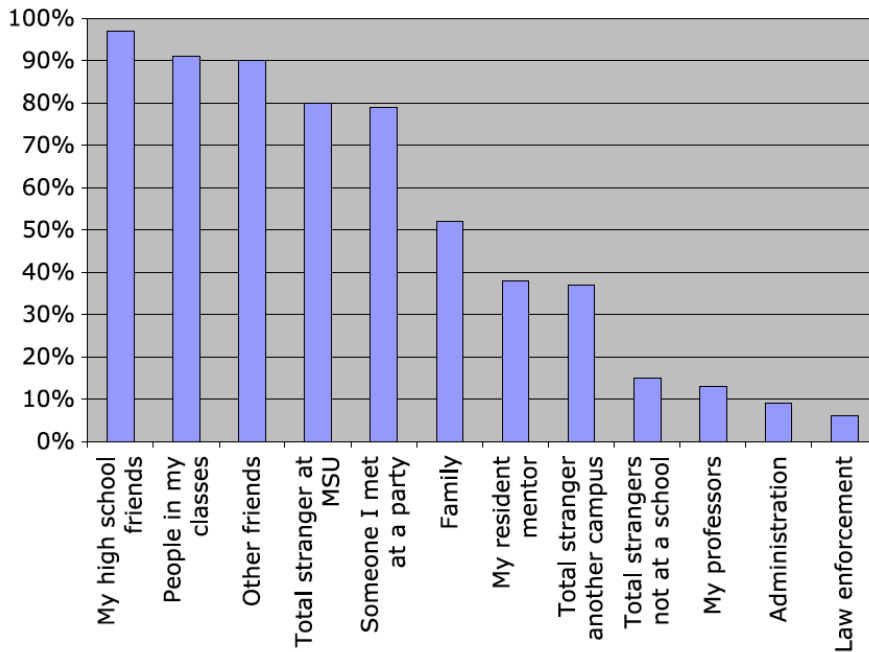
By the end of the semester, this comic will make sense:



Source: xkcd.com

Name: _____
S110
Class 1 Graph exercise

Please take a few moments to read the graph and fill out the questions below. Short (1-2 sentence) answers are fine. The exercise will be collected, but not graded.



Perceived Audience for Respondents' Facebook Profiles.

Source: Ellison, Steinfeld, & Lampe, "The Benefits of Facebook 'Friends'", *Journal of Computer-Mediated Communication*, 2007

1. How would you summarize the overall pattern in the graph? What kinds of people do we expect to read our Facebook page?
2. Imagine you learned that the study respondents were either (1) volunteers who responded to an advertisement in the student newspaper or (2) randomly selected to participate from the student directory. Would this change your evaluation of the information in the graph?

3. Imagine you learned that the study respondents either (1) filled out the study in a quiet cubicle at a survey research center or (2) filled out the study at home on their personal computers. Would this change your evaluation of the information in the graph?

4. Does this tell us who actually reads our Facebook pages? Why or why not?

5. Can you think of any other questions we should ask to evaluate the quality of the information in the graph?