

# **SOCIOLOGY 7: STATISTICS FOR SOCIAL SCIENTISTS**

Summer 2012

INSTRUCTOR: Szonja IvesterLECTURES: Tues, Wed, Thurs 2-4 pmOFFICE: Room 468, Barrows HallLECTURE HALL: Room 170, Barrows HallEMAIL: szonja@berkeley.eduOFFICE HOURS: Thursdays 12:30-1:30

# **COURSE DESCRIPTION**

Sociology 7 is a first course in statistics, covering basic concepts of descriptive and inferential statistics. The topics include graphical displays of data; summary statistics; the binomial and normal distributions; correlations and least squares; simple research designs; probability and random variables; and inferences about means, counts, and simple regression. Students will analyze and display small bodies of data using computers and calculators, and will interpret and evaluate research findings. By the end of the semester, students should be able to summarize data by using graphs, tables, measures of central tendency and spread; compute and interpret correlations and regressions for pairs of variables; use probability concepts to explain random sampling; understand a sampling distribution and its application in inferential statistics; and perform basic statistical inference such as testing hypotheses and calculating and explaining confidence intervals.

# **COURSE MATERIALS**

Required Text: David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. (w/ Student CD). Sixth Edition. New York, NY. W. H. Freeman. (ISBN: 1429295678) Don't buy earlier editions (sigh!) because content as well as page numbers vary across editions.

<u>Web Resources</u>: Moore's text comes with many useful online supplements that you are encouraged to explore (http://bcs.whfreeman.com/bps5e). These include self-quizzes, additional exercises, statistical applets, and data sets. All of the materials available on the free site are on the CD that comes with your textbook.

<u>SDA (Survey Documentation and Analysis)</u>: This is a web-based software program for the analysis of survey data. It is free, it is nicely documented, and it is user-friendly. We will use it for homework assignments as well as for our take-home exams. For more information, see http://sda.berkeley.edu.

# **COURSE REQUIREMENTS**

<u>Lectures</u>: Lectures will focus on basic concepts and their application. Attendance and participation are expected and they will contribute 30% towards your final grade. Beginning with the second week of classes (4th lecture), you will need to bring a 3x5 ruled index card with you each time we meet. You will use these index cars to submit at least one sentence of reaction to that day's class, indicating what you learned, or something you liked or did not like, found interesting or controversial, found clear or too simplistic, or found confusing and in need of further (or better) explanation; you may also submit comments on the course in general. Please note that you can submit a "reaction" only if you were actually in class. You will get 2 point for each daily reaction submitted, 0 otherwise.

<u>Homework Assignments:</u> In order to provide you with hands-on experience with statistics in sociology, I will ask you to complete a series of homework assignments. There will be a total of 5 such assignments. I will hand out homework assignments on Tuesdays in class and you will be expected to hand in your completed work on the following Thursday. Homework assignments are due at the beginning of class on the following Tuesdays: June 21<sup>st</sup>, June 28<sup>th</sup>, July 19<sup>th</sup>, July 26<sup>th</sup>, July 31<sup>st</sup>, and August 2<sup>nd</sup>. You are encouraged to talk to each other about your homework assignments (indeed, we will use some of our class time to discuss them), but the work that you hand in must be your own.

These assignments will jointly count towards 30% of your overall grade (each is worth 4%). You will receive full marks (4 points) on your assignment only if your work is on time, complete, substantially correct, and well documented. Late homework assignments will not be accepted unless (1) you have a doctor's notice that you were prevented from completing your work, or (2) you have secured my permission (by email) *in advance of the submission deadline* that a late submission would be accepted. In either case, the maximum points that you will be able to earn on a late homework assignment are 3, instead of the usual 4.

<u>Take-Home Exams</u>: There will be two take-home examinations in this class. Both of these will take the form of a mini statistics projects, requiring you to analyze a set of data and to interpret your results. Your first exam is scheduled for Thursday, July 12<sup>th</sup> and the second is for Thursday, August 9<sup>th</sup>. On these days we will not meet as a class so you are free to work on your mini project alone. In the case of both of these exams, I will distribute you exam on at the end of class on Tuesday and your *work is due at 4:00 pm in my office* (Room 468 Barrows Hall) on the day of the exam.

The exams will count towards 50% of your overall grade (with each exam counting 25%). You will receive full credit (25 points) for your exam if it is on time, complete, substantially correct, sensible, and well documented. Late exams will not be accepted unless (1) you have a doctor's notice that you were prevented from completing your work, or (2) you have secured my permission (by email) *in advance of the submission deadline* that a late submission would be accepted. In either case, the maximum points that you will be able to secure on a late exam are 20 instead of the usual 25.

#### FINAL GRADES

Your final grade in this class will be based on your performance on the two take home exams (50%), your homework assignments (30%), and your class participation (20%). In assigning final grades, I will use the following basic scheme:

A	95 – 100.99%	С	73 – 76.99%
A-	90 - 94.99%	C-	70 – 72.99%
B+	87 - 89.99%	D+	67 - 69.99%
В	83 - 86.99%	D	63 - 66.99%
B-	80 - 82.99%	D-	60 - 62.99%
C+	77 – 79.99%	F	00 - 59.00%

In this grade-inflated world of ours I'm not opposed to the idea of awarding students an A+ for exceptional work. However, in order to earn such a grade, you will have to earn a minimum of 101 points in this class. There will be no extra credit work assigned in Sociology 7, so your only way to secure these points is to turn in exemplary work throughout the course.

#### CHEATING AND PLAGIARISM

Academic dishonesty is not tolerated at Berkeley. If you are found to be cheating on assignments or to be engaging in scholarly misconduct, you will receive no credit for that task. "Helpfully" signing in a friend for class participation will result in both of you failing the class participation of your total grade.

# **CLASS WEBSITE**

I have set up a bSpace website for the class. You can find here a copy of the syllabus, an electronic version of our class schedule, PDF files for some of the assigned readings (under "Resources"), handouts and lecture notes (also under "Resources"). This is also where you will find announcements from me and see your grades. It is essential that you gain access to our class website as soon as possible because (1) many of our required readings reside here and (2) your homework assignments will be posted here.

How do you log in to bSpace? Log in to http://bspace.berkeley.edu with your CalNet ID and Passphrase. If you are enrolled through Telebears, you should see a tab at the top of the screen for our course when you log in. If you are enrolled in more than one course using bSpace you will, of course, see a tab for each course. If you are a concurrent enrollment student you cannot be assigned bSpace access until the status of your application is "Approval Completed." It is your responsibility to make sure that your application is reviewed and approved in a timely fashion. If you have questions about this, please email concurrent@unex.berkeley.edu.

# Course Timeline

Date	Focus	Deadlines & Activities
Tuesday, June 19	What is Statistics?	Hand out HW #1
Wednesday, June 20th	Data and Variables	0.11
Thursday, June 21st	Describing Distributions with Numbers	Collect HW #1
	Numbers	
Tuesday, June 26th	The Normal Distribution	Hand out HW #2
Wednesday, June 27th	Scatterplots and Correlation	
Thursday, June 28th	Simple Regression	Collect HW #2
Tuesday, July 3rd	No Class - HOLIDAY	
Wednesday, July 4th	No Class - HOLIDAY	
Thursday, July 5th	Interpreting Regression	
Tuesday, July 10th	Categorical Data: Cross-Tabulation	Hand out First Exam
Wednesday, July 11th	Catch-Up and Review	Traina Gue i ii Se Eirain
Thursday, July 12th	First Take-Home Exam	Due in my office by 4pm
Tuesday, July 17th	Producing Data: Sampling	Hand out HW #3
Wednesday, July 18th	Producing Data: Experiments	Collect HW #3
Thursday, July 19th	Randomness & Probability Models	Collect HW #3
Tuesday, July 24th	Sampling Distribution	Hand out HW #4
Wednesday, July 25th	Confidence Intervals	
Thursday, July 26th	Significance Tests	Collect HW #4
		,
Tuesday, July 31st	Inference for the Mean	Hand out HW #5
Wednesday, August 1st	Inference for Two Means	Collect HW #5
Thursday, August 2nd	Inference for Two-Way Table	Collect HW #5
Tuesday, August 7th	Inference for Regression	Hand out Second Exam
		HW #6 due in class
Wednesday, August 8th	Catch-Up and Review	
Thursday, August 9th	Second Take-Home Exam	Due in my office by 4pm

# READINGS ON STATISTICS FOR SOCIAL SCIENTISTS

You are responsible for the "required readings" listed in this section of the syllabus. These are the only readings that I expect you to complete and these are also the only readings on which I will test you in your homework assignments as well as in our exams. From time to time, I have included a few "recommended readings" in this syllabus. These are intended to help you understand basic concepts and ideas, clarify complicated issues and procedures, as well as illustrate the ways in which statistics are applied in actual research. You are not required to consult these readings in the sense that I will not test you on these materials in class. However, you will likely find them useful and I will most definitely refer to them in class.

#### WHAT IS STATISTICS?

# Required Readings:

- Robert Hooke. 1989. "Statistics, Sports, and Some Other Things." Pages 188-197 in *Statistics: A Guide to the Unknown* (Third Edition), edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)
- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "To the Student" Statistical Thinking," pages xxviii-xxxiv. (textbook)

# Recommended Readings:

- Joel Best. 2011. "The Importance of Social Statistics." Pages 9-29 in *Damned Lies and Statistics by Joel Best.* Berkeley, CA: University of California Press.
- Larry Gonick. 1993. *The Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 1: What is Statistics," Pages 1-6.
- David S. Moore. 2006. "Learning from Data," pages xvii-xxiv in Statistics: A Guide to the Unknown (Fourth Edition), edited by Roxy Peck, George Casella, George Cobb, Roger Hoerl, Deborah Nolan, Robert Starbuck, and Hal Stern. Belmont, CA: Thomson.

#### **DATA AND VARIABLES**

# Required Readings:

- William Kahn and Leonard Rosen. 2006. "Advertising as An Engineering Science." Pages 373-389 in *Statistics: A Guide to the Unknown* (Fourth Edition), edited by Roxy Peck et al. Belmont, CA: Thomson. (online)
- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 1: Picturing Distributions with Graphs," pages 3-37. (textbook)

### Recommended Readings:

• Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "Basic Concepts," pages 1-17.

- Darrell Huff. 1993. How to Lie with Statistics. New York, NY: W. W. Norton. Especially Chapters 3 ("The Little Figures That Are Not There"), 5 ("The Gee-Whiz Graph"), and 6 ("The One-Dimensional Picture").
- Edward R. Tufte. 2001. The Visual Display of Quantitative Information. Cheshire, CT: Graphics Press.

# **DESCRIBING DISTRIBUTIONS WITH NUMBERS**

# Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read: "Chapter 2: Describing Distributions with Numbers," pages 40-67. (textbook)
- Elizabeth Street and Mavis B. Carroll. 1989. "Preliminary Evaluation of a New Food Product." Pages 161-169 in *Statistics: A Guide to the Unknown* (Third Edition), edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)

### Recommended Reading:

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read pages 19-28.
- Larry Gonick. 1993. *The Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Data Description," pages 7-26.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read pages 27-54.

#### NORMAL DISTRIBUTION

#### Required Reading:

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read: "Chapter 3: The Normal Distributions," pages 69-95. (textbook)

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "The Bell: Normal Distribution," pages 29-40.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read pages 25-26.
- David S. Moore. 1997. "Normal Distributions." Pages 43-58 in *The Active Practice of Statistics* by David S. Moore. New York, NY: W. H. Freeman and Company.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read: "Chapter 9: The Normal Probability Distribution," pages 166-181.

#### SCATTERPLOTS AND CORRELATION

# Required Readings:

- Joseph B. Kruskal. 1989. "The Meaning of Words." Pages 132-141 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)
- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read: "Scatterplots and Correlation." (textbook)

#### Recommended Readings:

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "Dots and Lines: Prediction and Best Fit," pages 42-50.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read pages 195-196.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Scatter Plots" (pages 82-83), "Looking for Patterns in the Data" (pages 84-85), and "Correlation" (pages 86-87).

#### SIMPLE REGRESSION

# Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 5: Regression," pages 125-157. (textbook)
- Daniel S. Wilks. 2006. "Statistical Weather Forecasting." Pages 171-181 in *Statistics: A Guide to the Unknown*, Fourth Edition, edited by Roxy Peck et al. Belmont, CA: Thomson. (online)

# Recommended Readings:

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "Dots and Lines: Prediction and Best Fit," pages 42-50.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 11: Regression," pages 187-198.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Least-Squares Regression Line," pages 88-89.

#### INTERPRETING REGRESSION

#### Required Reading:

• Jennifer Hill. 2006. "Evaluating School Choice Programs." Pages 69-87 in *Statistics: A Guide to the Unknown*, Fourth Edition, edited by Roxy Peck et al. Belmont, CA: Thomson. (online)

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Re-read "Cautions about Correlation and Regression," pages 142-146 (textbook)

# Recommended Readings:

- Gonick, Larry. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read pages 187-198.
- Christopher H. Achen. 1982. *Interpreting and Using Regression*. A Sage University Paper (#29). Beverly Hills, CA: Sage.

# CATEGORICAL DATA: CROSS-TABULATION

# Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 6: Two-Way Tables," pages 159-173." (textbook)
- D. D. Reid. 1989. "Does Inheritance Matter in Disease? The Use of Twin Studies in Medical Research." Pages 53-59 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur. Belmont, CA: Duxbury Press. (online)

# Recommended Readings:

• Lloyd, Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Chapter 6: Exploring Categorical Data." pages 103-118.

#### PRODUCING DATA: DESIGNING SAMPLES

#### Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 8: Producing Data – Sampling," pages 199-221. (textbook)
- Duncan Neuhauser. 1989. "The Metro Firm Trials and Ongoing Patient Randomization." Pages 25-30 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur. Belmont, CA: Duxbury Press. (online)

- Earl Babbie. 2013. *The Practice of Social Research*. Thirteenth Edition. Belmont, CA: Wadsworth. Read "Chapter 7: The Logic of Sampling," pages 187-222.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 6: Sampling," pages 89-97.

# PRODUCING DATA: DESIGNING EXPERIMENTS

# Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 9: Producing Data – Experiments," pages 224-245. (textbook)
- Joseph P. Newhouse. 1989. "The Health Insurance Experiment." Pages 31-40 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)

#### Recommended Readings:

- Earl Babbie. 2013. *The Practice of Social Research*. Thirteenth Edition. Belmont, CA: Wadsworth. Read "Chapter 8: Experiments," pages 228-249.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 10: Experimental Design," pages 181-186.

# RANDOMNESS AND PROBABILITY MODELS

# Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 10: Introducing Probability." (textbook)
- John Neter. 1989. "How Accountants Save Money By Sampling." Pages 151-160 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)

#### Recommended Readings:

- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 4: Random Variables," Pages 53-872.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Chapter 7: Randomness, Uncertainty, and Probability, pages 119-143.

#### SAMPLING DISTRIBUTIONS

#### Required Reading:

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 11: Sampling Distributions, pages 285-305 (textbook)

# Recommended Reference:

• Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "Making Assumptions: Introduction to Inferential Statistics," pages 51-57.

- Lloyd Jaisingh. 2000. Statistics for the Utterly Confused. New York, NY: McGraw-Hill. Read "Chapter 10: Sampling Distributions and the Central Limit Theorem," pages 189-203.
- David S. Moore. 1997. "Sampling Distributions." Pages 184-203 in *The Active Practice of Statistics* by David S. Moore. New York, NY: W. H. Freeman and Company.

#### **CONFIDENCE INTERVALS**

# Required Readings:

- David R. Brillinger. 1989. "Estimating the Chances of Large Earthquakes by Radiocarbon Dating and Statistical Modeling." Pages 249-260 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)
- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 14: Confidence Intervals -The Basics," pages 351-367. (textbook)

# Recommended Readings:

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "How Science Works: Inferential Statistics and Hypothesis Testing," pages 58-67.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 7: Confidence Intervals," pages 111-136.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Chapter 11: Confidence Intervals," pages 215-234.

#### SIGNIFICANCE TESTS

#### Required Readings:

- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 15: Tests of Significance - The Basics," pages 369-389(textbook)
- Sandy L. Zabell. 1989. "Statistical Proof of Employment Discrimination." Pages 79-86 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press.

- Bernard Berkovitz. 1991. *Statistics for Poets: A Manual for Those So Inclined.* ISBN: 096687840X. Read "Fancy Guessing: The t-Test," pages 68-82.
- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 8: Hypothesis Testing," pages 137-156.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Hypothesis Tests Large Samples," pages 235-264 and "Confidence Intervals and Hypothesis Tests Small Samples," pages 265-288.

#### INFERENCE FOR THE MEAN

# Required Reading:

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read Chapter 18: Inference about a Population Mean," pages 437-463. (textbook)

# Recommended Readings:

- Gonick, Larry. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 8: Hypothesis Testing," 137-156.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Hypothesis Tests Large Samples," pages 235-264 and "Confidence Intervals and Hypothesis Tests Small Samples," pages 265-288.

# **COMPARING TWO MEANS**

#### Required Reading:

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 19: Two-Sample Problems," pages 465-491. (textbook)

# Recommended Readings:

- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Chapter 9: Comparing Two Populations," pages 157-180.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused* by Lloyd Jaisingh. New York, NY: McGraw-Hill. Read: "Hypothesis Tests Large Samples" (pages 235-264) and "Confidence Intervals and Hypothesis Tests Small Samples" (pages 265-288).

#### INFERENCE FOR TWO-WAY TABLES

# Required Reading:

• David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 23: Two Categorical Variables - The Chi-Square Test," pages 553-585. (textbook)

- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Chapter 14: Chi-Square Procedures," pages 289-304.
- David S. Moore. 1997. "Two-Way Tables." Pages 311-328 in *The Active Practice of Statistics* by David S. Moore. New York, NY: W. H. Freeman and Company.

# INFERENCE FOR REGRESSION

# Required Readings:

- Miller, Robert G. 1989. "Very Short Range Weather Forecasting Using Automated Observations." Pages 261-267 in *Statistics: A Guide to the Unknown*, Third Edition, edited by Judith M. Tanur et al. Belmont, CA: Duxbury Press. (online)
- David S. Moore, William I. Notz, and Michael A. Fligner. 2013. *The Basic Practice of Statistics*. Sixth Edition. New York, NY. W. H. Freeman. Read "Chapter 24: Inference for Regression," pages 587-621. (textbook)

- Larry Gonick. 1993. *A Cartoon Guide to Statistics*. New York, NY: Harper Perennial. Read "Statistical Inference," pages 199-207.
- Lloyd Jaisingh. 2000. *Statistics for the Utterly Confused*. New York, NY: McGraw-Hill. Read "Exploring Bivariate Data," pages 82-102.