

Sociology 6150: Social Statistics II
Spring 2016

Th. 12-1

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Office Hours: ~~Mon-Fri~~ 12; T, W 11-12
Or make an appointment
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Course Description

1. The course begins with a brief overview of the basics, including level of measurement, central tendency and variability, graphing, validity and reliability, central limit theorem, correlation in its nonparametric and parametric forms.
2. The speed of the course becomes very rapid after that point as the class reaches correlation. Then the class moves into multiple regression and its many uses including some path analysis, factor analysis, even possibly scaling, and then to logistic regression.
3. If you don't know what item 1 above means: *worry*. Take the course in FALL, 2014, when the class will be smaller. If you know what both paragraph 1 and paragraph 2 mean, and have taken a class or classes that cover those topics, then you shouldn't be in this class.

Goals and Objectives:

The learning objectives for this class are relatively modest.

1. First, you should be able to understand, and appropriately utilize, statistical language at a graduate level.
2. Second, you should come to know the nature of "statistical significance" and understand the **very important pitfalls** of using it.
3. Third, you should be able to understand and use regression analysis, anova, logistic regression, other general multivariate linear model techniques and chi-square techniques with appropriate variables and reasoning
4. Fourth, you should be able to interpret, adequately, the output from such statistical analyses in both a research article, and, in a statistical analysis
5. Lastly, you should know when to utilize these various techniques and to have a sense of the other sorts of analytical techniques that are appropriate when these are not.

In practice this means that students should be able to (a) read many social science journals in their field; (b) generally understand what statistical techniques are used by the authors of those journals; (c) utilize the general linear model and general logistical model for a variety of analytical tasks; and (d) have the tools to continue in graduate study to take further social science coursework.

There are caveats. This is one semester and cannot cover everything. The course focuses primarily on understanding, not on mathematical proofs. You, the student, will only get as much out of the course as you put into it. If you choose to put in just enough time to do the homework,

you will not get much out of the class. If you put in more time, and treat this as seriously as you do your theory and substantive area classes, you will learn a great deal more and you will truly learn something.

Required Course Text

Discovering Statistics Using IBM SPSS Statistics, 4th Edition. By Andy Field. (2013) Sage Publications. Yes, there are QR codes. There are You-Tubes of the instructor. There are Cramming tips. There is a companion website. You can absolutely, if you feel thusly inclined, teach yourself via the book.

So what's my job? To guide you through the book, yes, but to provide added value by guiding you into your disciplinary literature and provide guidance about how to write and think in statistics speak.

Other required readings

You and your fellow students will bring in articles from journals that are to be read by the class. These articles will be made available online for all other students in the class to read. Students will present the statistical methods in the article and talk about how the statistics in the article are used to test the hypotheses or research question in the article. Yes you may work with someone else in presenting the articles, but you must do the presentations.

Evaluation

Your work will be evaluated on the basis of a series of nearly weekly homework assignments; in-class presentations of articles; two brief mid-term quizzes designed to check on you to keep up to date with the class in terms of understanding; a final overall exam; and in-class participation including presentation of the article(s). The nature of this class is cumulative, so everything is cumulative. The homework is take-home. The in-class participation, quizzes and final are not take home.

Homework: 48% There will be **between 7 & 12 of these depending on student learning styles**

Final: 37% Final & 2 quizzes : All cumulative. They will be mostly

Quizzes 1 & 2: multiple choice, short answer with some analysis.

In-Class Participation: 15% In-class participation may include **pop-quizzes** and include in-class presentation of articles

You may work together on homework, but your written answers to homework must be in your own words. Answers to homework questions or projects must be in complete sentences. Your goal in doing homework is to explain **why** something is, not to say "it is" or "isn't".

Grades in percentages, *weighted as described above*

91-100=A 90=A- 89=B+ 88-82=B 80-81=B- 79=C+ 78-72=C 70-71= C- 69=D+ 68-60=D

General Course Policies

Assignments Outside of Class: Utah State University policy calculates out-of-class assignments in graduate classes, including reading and studying, to require an average of fifteen to twenty hours weekly.

Incompletes: University policy states that incomplete grades are not to be given for poor performance in class. Any incomplete must be cleared with me before the end of the semester and must be completed within six weeks of the end of the semester. You will be expected to sign a contract specifying the terms of the incomplete grade.

Extra Credit: Extra credit is not given. If you show improvement over the course of the term, you will be given the benefit of the doubt in the final grade. That is, if your first assignments were D or C level and later assignments were A or B level, I will assign greater weight to the later work.

Late Assignments: Any assignment turned in after that assignment has been graded and returned to other students will be docked one full letter grade.

Plagiarism & Cheating: Plagiarism is the use of another person's written or oral work without citation of the author. This includes "borrowing" from fellow students. Cheating includes such a wide variety of possible techniques that it is not possible to delineate them all here, however, the worst example of these is plagiarism. The first instance of either receives a grade of F for the assignment or quiz. The second instance results in a grade of F for the course.

Students with special needs

If you need special arrangements for testing, assignments, or other aspects of the course, you may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444 voice, (435)797-0740 TTY, (435)797-2444 VP, or toll free at 1-800-259-2966. Please contact the Disability Resource Center (DRC) as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice. Please also contact me within the first two weeks of class if you have or anticipate having authorization from the Center, and we will make necessary arrangements.

Academic Integrity

Honor Pledge

Students will be held accountable to the Honor Pledge which they have agreed to: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

Academic Dishonesty

As with all courses at USU, you are expected to follow the University's rules and regulations about academic honesty and integrity and exams and papers are to be original work. For detailed information on the definition of plagiarism, behaviors that violate the University's standards, and the disciplinary penalties and procedures, see full text of the Student Code at: www.usu.edu/student-services/pdf/StudentCode.pdf. Please note that it is your responsibility to know these rules, and lack of familiarity with these rules cannot be an excuse for acts of misconduct in any case.

Classroom Civility Policy

Be respectful of your classmates and your instructor. Respect includes *not texting*; not Instagram nor Snapchatting; nor Facebooking; nor reading the newspaper; etcetera.

For heaven’s sake do not email me during class. And do not email me 20 minutes before class then ask if I received your email.

Dates ¹	Topics to be discussed that day	Readings And readings will be added as appropriate – from the news, other statistics texts, etc.	Homework
11-Jan	Review	Please have Read Chapters 1-4 in Field	Find articles in your field that have statistical usage in them. See Canvas for other details.
25-Jan	Introducing & using SPSS; Statistical Significance Testing, Data Screening	Please read 5 & 6 for next time In-class reading & presentation Of journal article(s)	Homework 2 due: Identifying levels of measurement, types of central tendency, independent and dependent variables, reliability and so forth
Feb 1	alternative correlation - chi-square, phi, contingency table, point biserial,	Please have read 7 through 9 for next time Presentation of journal article(s) (read these ahead of time)	Homework 3 due: Can you use Z-scores appropriately? What are confidence limits all about? Is statistical significance really real? Really?
Feb 8	GLM: Bivariate Correlations; Part, Partial Correlations & Regression	Please read Chapter 10 Presentation of journal article(s) (read these ahead of time)	Quiz about here, either, depending on student progress
16-Feb	GLM: Multivariate Regression & violations of assumptions	Presentation of journal article(s) (read these ahead of time)	Home work 4 due: Correlation, what it means, how to do it, checking for assumptions
		Anything based on SS is part of General Linear Model or GLM –	

¹ I **absolutely** reserve the right to alter these dates depending on the progress of the class

² If there is no specified reading assigned, reread previous chapters!

		so, from pearson r onward, this General Linear Model.	
22 Feb	GLM: Multiple regression with dummies; interactions; ecological rs	Presentation of journal article(s) (read these ahead of time)	Homework 5: Multiple regression and Interpretation
Mar 14	GLM: Interaction terms; ecological rs; violations of assumptions; etc. Path analysis	Presentation of journal article(s) (read these ahead of time)	Homework 6: Multiple Regression and interpretation
Mar 21	Catching our breaths	Please read chapter 11& 12 for next time	Quiz about here, depending on student progress, either Feb 26 or March 5
28-Mar	GLM: ANOVA	Skim Chapters 13-16; read 17 for next time Presentation of journal article(s) (read these ahead of time)	
APR -4	GLM: Factor Analysis & Scaling	Presentation of journal article(s) (read these ahead of time)	Homework 7 – as appropriate, on Anova
Apr-11	GLM: More Factor Analysis as necessary	Read chapters 18 & 19 for next time Presentation of journal article(s) (read these ahead of time)	Homework 8: Factor Analysis
18-Apr	Categorical data	Reread 19 for next time Presentation of journal article(s) (read these ahead of time)	
25-Apr	Logistic Regression	Presentation of journal article(s) (read these ahead of time)	Homework 9: Logistic Regression
25-Apr	How does it all Fit together?	Yes, it fits together.	
2-May	Final Exam	3:30 p.m.	

Day 1

Syllabus

Go over UTF

Go over Writing Associates

Go over dates

Go over what is urban

Use the example at the end of the first chapter

Use assignment #1