Statistics for Sociology (SOCI 3330 001)

Contact Information

Dr. Joseph M. Simpson, Associate Professor of Sociology
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Office: 350C CAB
Student Hours: Tuesday & Thursday 10:00 -10:45 am or by Appointment Book time with Joseph Simpson

Course information

When: Tuesdays and Thursdays from 11:00 pm – 12:15 pm
Where: Senator Frank L. Madla 352

Course Description

In this class, you will be introduced to descriptive and basic inferential techniques and tests using major analysis software. Students will apply knowledge gained in this class through application to a hands-on, semester-long research project.

Text & Materials

David Diez, Mine Cetinkaya-Rundel, Christopher Barr and OpenIntro. 2019. OpenIntro Statistics: Fourth Edition. https://leanpub.com/openintro-statistics

Stata 18 https://www.stata.com/order/new/edu/profplus/student-pricing/

Course Goals

- To develop the student's ability to conduct statistical analysis of quantitative data and understand statistical concepts;
- To increase the students' understanding of the appropriate use of analytic techniques in both descriptive and inferential methods, including mean, median, mode, standard deviation, probability, sampling, hypothesis testing, t-tests, chi square, correlation, and linear regression;
- To improve the student's ability to interpret statistical results involving univariate and multivariate statistical analysis;
- To develop the student's ability to use statistical and database software such as Stata and Google Documents;

- Students demonstrate the ability to interpret quantitative information presented in mathematical forms (e.g. graphs, tables, and diagrams) to analyze a real world problem
- Students demonstrate the ability to represent quantitative information in various forms (e.g. graphs, tables, and diagrams) to pose argument in the context of a real world problem
- Students demonstrate the ability to apply a model based on quantitative information to formulate a solution of a real world problem
- To give the student experience in exploring and working with secondary data to prepare the individual to conduct his/her own research.
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Academic Integrity

Academic Dishonesty: Students are expected to adhere to the highest standards of academic honesty and integrity. Academic Dishonesty for which a student is subject to penalty includes cheating, plagiarism, fabrication, multiple submission, misrepresentation of academic records, facilitating academic dishonesty, unfair advantage, violating known safety requirements and ethical misconduct. Engaging in one of these activities may result in a zero for the assignment or a grade of "F" for the course. All students are responsible for being familiar with the Academic Dishonesty Policy, which may be found in the Texas A&M University-San Antonio Student Handbook

Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disability. If you believe you have a disability that may require accommodations, please contact Disability
Support Services (DSS) for the coordination of services. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in suite 210. The phone number for DSS is (210) 784-1335 and email is dss@tamusa.edu.

Classroom Courtesy

Courtesy is expected, especially when we are dealing with sensitive topics. For that reason, the following rules will be enforced.

- ➢ If you have questions, ask them. But do so in a respectful manner.
- ➢ All comments made to classmates and/or the instructor must be respectful. This includes comments made through private channels such as email.
- ➢ If you are uncomfortable about a statement made by any other student, notify me as quickly as possible.
- ➢ Do not link to other online information or send links to other websites without consulting me first. There is a great deal of "information" on the Internet that is inappropriate and/or incorrect.

Any statement that is discriminatory or disrespectful toward any group of people or that creates a forum hostile to others will not be tolerated. It is possible that comments will not be intended as discriminatory or disrespectful but may be interpreted as such. In these cases, I will discuss why the statement is inappropriate the first time. Use of identified terms or phrases after that will be interpreted, as intentionally disrespectful and appropriate disciplinary actions will be taken.

Assignments

- ❖ Applications: 25 points each (225 points total)
  - All applications are to be completed by the date listed in the schedule at 11:59 pm. An online drop box for each assignment will be under Course Content on blackboard.
  - All assignments must be turned in as a Microsoft Word document (*.doc or *.docx).
  - Take time to double check your assignment before submission. If you make a mistake you do have an additional attempt for each assignment. Do not waste your attempts.
  - If you turn in your assignment late you will lose 10% from your earned grade.
- ❖ Exams: 75 points each (225 points total)
  - There will be three exams.
  - Exams will be completed on Blackboard.
  - Exams will be open for 48 hours starting on the day the exam is scheduled.
  - Each student will have two attempts.

I may offer extra credit opportunities.

Grading Scale

A	100-90%	450-401 points
B	89-80%	400-356 points
C	79-70%	355-311 points
D	69-60%	310-266 points
F	59-00%	265-000 points

SCHEDULE, READINGS, & ASSIGNMENTS

Week	Day	Reading	
1	Aug. 26	Introductions and Syllabus OS: 1.2 Data basics p 12 OS: 1.3 Sampling principles and strategies p 22	
	Aug. 28	Lab #1	
2	Sept. 2	OS: 2.1 Examining numerical data p 41 OS: 2.2 Examining categorical data p 39	
	Sept. 4	Lab #2	Application #1
3	Sept. 9	OS: 3.1 Defining Probability	
	Sept. 11	Lab #3	
4	Sept. 16	OS: 4.1 Normal Distribution	Application #2
	Sept. 18	Lab #4	
5	Sept. 23	OS: 5.1 Point estimates and sampling variability p 170 OS: 5.2 Confidence intervals for a proportion p 181	Application #3
	Sept. 25	Exam #1	Exam #1
6	Sept. 30	OS: 6.1 Inference for a single proportion p 208	
	Oct. 2	Lab #5	
7	Oct. 7	OS: 6.2 Difference of two proportions p 217	Application #4
	Oct. 9	Lab #6	
8	Oct. 14	OS: 6.3 Testing goodness of fit using chi-square OS: 6.4 Testing for independence in two-way tables p 240	Application #5
	Oct. 16	Lab #7	
9	Oct. 21	OS: 7.1 One-sample means with the t-distribution p 251 OS: 7.2 Difference of two means p 267	
	Oct. 23	Lab #8	
10	Oct. 28	OS: 7.3 Power calculations for a difference of means p 278	Application #6
	Oct. 30	Exam #2	Exam #2
11	Nov. 4	OS: 8.1 Fitting a line, residuals, and correlation p 305 OS: 8.2 Least squares regression p 317	
	Nov. 6	Lab #9	
12	Nov. 11	OS: 8.3 Types of outliers in linear regression p 328 OS: 8.4 Inference for linear regression p 331	Application #7
	Nov. 13	Lab #10	
13	Nov. 8	OS: 9.1 Introduction to Multiple regression p 343	Application #8
	Nov. 10	Lab #11	
14	Nov. 25	Lab #12	
	Nov. 27	*Thanksgiving*	
15	Dec. 2	Lab #13	
	Dec. 4	Lab #14	Application #9
16	Dec. 9	Final Exam 10:00-11:50 AM	Final Exam