Sociology 5314: Social Statistics
Fall, 2017

Credit Hours: 3 hours
Instructor: Dr. Furjen Deng
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(through Blackboard Message/Course Email)
Office Hours: Mondays, Wednesdays: 10-12 p. m., or by appointment

COURSE DESCRIPTION:
The purpose of this course is to teach you how to analyze data using various advanced statistical techniques. The statistical techniques introduced include, but are not limited to, descriptive statistics, hypothesis testing, correlation, partial correlation, multiple regression, and logistic regression. Pre-recorded lectures, readings and assignments will be used to describe and illustrate the logic, interpretation, and assumptions of each statistical model. Statistical Package for Social Sciences (SPSS) is also adopted to analyze the data. Emphasis is upon intuitive understanding of the techniques and their assumptions as well as on applications.

COURSE OBJECTIVES:
1. To gain factual knowledge and to provide a clear and detailed step-by-step illustrations of statistical techniques taken up in this course.
2. To learn how to apply course material to improve thinking, problem solving, and decision making.
3. To learn how to find and use resources for answering questions or solving problems.
4. To learn how to use data in the SPSS statistical package, to compute statistics using SPSS, and to interpret the statistical outputs from SPSS.

COURSE FORMAT:
This is an online graduate course. Students are expected to read the assigned readings, watch the pre-recorded lectures, complete the assignments, and take the exams. Before we start a new topic, I will post the pre-recorded lecture, assigned readings, and assignment. Additionally, there will be a discussion board, called virtual office that will be used to pose questions on the readings and assignments to fellow students, teaching assistant, and the instructor. If you have any technical difficulty while taking this online course, please contact:

SHSU Online Technical Team
Email: blackboard@shsu.edu
Phone: (936) 294-2780
Toll-free: (877) 759-2232
Hours: Mon-Sat 7am-Midnight (Email/Phone)

TEXTS:
1. Norušis, Marija J. 2011, IBM SPSS 19: Guide to Data Analysis, Prentice Hall: Englewood Cliffs, New Jersey. ISBN-10: 0321748417 | ISBN-13: 978-0321748416.
2. Kahane, Leo H. 2008, Regression Basics, Thousand Oaks, CA: Sage Publications.
3. Menard, Scott. 2001. Applied Logistic Regression Analysis, 2nd edition, Sage Publications:

Thousand Oaks, California.
4. Online Statistics Education: A Multimedia Course of Study (http://onlinestatbook.com/).
   Project Leader: David M. Lane, Rice University. (Recommended).
5. Khan Academy, Probability and Statistics. Free online lecture.
   https://www.khanacademy.org/math/probability/statistics-inferential.

SPSS Software: If you are on campus, you may access SPSS through SHSU Programs. You may also request SPSS home use license for students by calling SHSU-IT Service Desk. Their phone number is: 936-294-1950.

REQUIREMENTS:

Assignments: Each student is required to complete 10 assignments applying the major statistical techniques to concrete problems using the General Social Survey data file (*GSS2014.sav*),*inmate97.sav file* or any data set of your choice. Copies of GSS2006.sav, GSS2014 and inmate97.sav data files are posted under "Course Content" and "Doc sharing". Assignments and a specific due date for each assignment is listed in the next page under "Course Outline" and posted in the Blackboard. **All assignments are prepared in word file, not pdf file.** All assignments must be turned in before the deadline under the particular "Assignment". **NO LATE ASSIGNMENTS.**

Exams: There will be four major exams including the final exam. Specific dates and times for each exam are listed in the next page under "Course Outline".

Grading Policy: Your final course grade will be computed as follows:

Source	Percent
10 assignments	40
4 Exams	60
Total	100

You should get about 90% for an "A", 80% for a "B", and 70% for a "C". Courses may be dropped without a grade of "F" through the last class day, but prior to any final exams being taken or course completion. Students wishing to drop courses after the term's online drop deadline must submit a drop request form, signed by the professor, to the Registrar's Office.

ACADEMIC DISHONESTY POLICY

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. At a minimum the student will receive a failing grade on the assignment in which dishonesty was

involved. For a detailed description of this policy, please visit the following link:
http://www.shsu.edu/syllabus/

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:
http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf

STUDENT ABSENCES ON RELIGIOUS HOLY DAYS POLICY
Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. "Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code. For a detailed description of tis policy, please visit the following link:
http://www.shsu.edu/dept/academic-affairs/documents/aps/students/861001.pdf

VISITORS IN THE CLASSROOM
(Does not apply; online class)

INSTRUCTOR EVALUATIONS
To enhance the quality of teaching, each student will be asked to complete a course/instructor evaluation form toward the end of the semester.

COURSE OUTLINE AND ASSIGNED READINGS

Week 1 (Aug. 23-30)	Topic 1 Steps in Social Research Process (Read: Lecture Notes: Topic 1; Land, Chs. I and VI) Assignment 1: due on August 30, 11:59 pm)
Week 2 (August 31-6)	Topic 2 Learning SPSS 21.0 for Windows (Reading: Lecture Notes: Topic 2; Norušis, Chapters 1, 2 and 3) Assignment 2: due on Sept. 6, 11:59 pm)
Week 3 (Sept. 7-13)	Topic 3 Descriptive Statistics and Standard Normal Distribution (Read: Lecture Notes: Topic 3; Norušis, Chapters 4, 5, 6, 7, 11 and A; Lane: Chs. II, III and VII) Assignment 3: due on Sept. 13; 11:59 pm)
Week 4	Exam 1 (Sept. 15, 8 am to Sept. 16, 11:59 pm)
Week 5 (Sept. 18-25)	Topic 4 Sampling Distribution and Hypothesis Testing (Read: Lecture Notes: Topic 4; Norušis, Chapters 10 and 12; Lane, Chs: IX, XI, and XII: 1, 2 and 3) Assignment 4: due on Sept. 25, 11:59 pm
Week 6 (Sept. 26- Oct.4)	Topic 5 Correlation and Partial Correlation Analysis Read: Lecture Notes: Topic 5; Norušis, Chapter 19, 20; Lane, Ch. IV) Assignment 5: due on Oct. 4, 11:59 pm
Week 7	Exam 2 (October 6, 8 am – October 7, 11:59 pm)
Week 8 (Oct. 8-18)	Topic 6 Simple Linear Regression (Read: Lecture Notes: Topic 6; Norušis, Chapters 20, 21 and 22; Kahane, Chapters 1, 2 and 3; Lane: Ch. XIV) Assignment 6: due on Oct. 18, 11:59 pm
Week 9 (Oct. 19-27)	Topic 7 Multiple Regression Read: Lecture Notes: Topic 7; Norušis, Chapters 23 and 24; Kahane, Chapters 4, 6 and 7) Assignment 7: due on Oct. 27, 11:59 pm
Week 10 (Oct. 28- Nov. 6)	Topic 8 Multiple Regression with Nonlinear and Dummy Independent Variables (Read: Lecture Notes: Topic 8; Kahane, Chapter 5) Assignment 8: due on Nov. 6, 11:59 pm
Week 11	Exam 3 (Nov. 18, 8 am to Nov. 9, 11:59 pm)
Week 12	Topic 9 Logistic Regression

(Nov. 10-21)   (Read: Lecture Notes: Topic 9; Menard, Chapters 1, 2, 3 and 4)
                      Assignment 9: due on Nov. 21, 11:59 pm

Week 13   Topic 10 Multinomial Logistic Regression
(Nov. 22-Dec. 1)   (Read: lecture Notes: Topic 10)
                      Assignment 10: due on Dec. 1, 11:59 pm)

Week 14   Exam 4/Final Exam (Dec. 4, 8 am to Dec. 5, 11:59 pm)