Statistics for Criminal Justice
CJ 7350M-001

Fall 2015
School of Criminal Justice
Texas State University

Classroom: Hines Academic Center 201
Class Meetings: Monday, 6:30 – 9:20
Professor: Dr. Shayne Jones
Office: Hines Suite 120
Office Hours: Monday/Wednesday, 3 – 5
E-Mail Address: sjones.crim@gmail.com or sej57@txstate.edu

Required Texts

Gravetter, F. J., & Wallnau, L. B. (2012). *Essentials of statistics for the behavioral sciences* (8th Ed.).Belmont, CA: Thomson/Wadsworth.

Lewis-Beck, M. S. (1980). *Applied regression: An introduction*. (Sage University Paper Series on Quantitative Applications in the Social Sciences, series no 07-022). Newbury Park, CA: Sage.

Schroeder, L. D., Sjoquist, D. L., & Stephan, P. E. (1986). *Understanding regression analysis: An introductory Guide*. (Sage University Paper Series on Quantitative Applications in the Social Sciences, series no 07-022). Newbury Park, CA: Sage.

Pampel, F. C. (2000). *Logistic regression: A primer*. (Sage University Paper Series on Quantitative Applications in the Social Sciences, series no 07-022). Newbury Park, CA: Sage.

Optional Texts

Berkman, E. T., & Reise, S. P. (2012). A conceptual guide to statistics using SPSS. Los Angeles: Sage.

Course Description

This course is an introductory-level graduate statistics course and is designed to provide students with a basic understanding of the fundamental statistical analyses that are commonly employed in criminal justice. Both descriptive and inferential statistics will be covered. Descriptive statistics refers to the basic properties of the data, including the most typical case and how dispersed the data are. Inferential statistics refers to a branch of statistics that goes beyond simply describing the data, and allows researchers to begin making inferences about a sample drawn from the population. The course will conclude with an examination of multivariate data analytic techniques, including linear and logistic regression.

This course is worth 3 credit hours and is required for all criminal justice graduate students.

Course Objectives

There are three broad, related objectives for this course. First, each student will leave this course with a basic understanding of the statistical analyses that we cover. This entails understanding why statistical knowledge is vital for you as a graduate student. It also involves understanding the statistical analyses themselves, with a focus on knowing the purpose of specific statistical procedures and when to use them. Second, each student will leave the course knowing how to conduct the analyses we cover. It is crucial that knowledge extends beyond a conceptual level of statistics to an applied level. In fact, this course is geared as much toward application as theory. Third, each student will complete this course knowing how to interpret SPSS (Statistical Software for the Social Sciences) output, which includes being able to view the results created by the statistical analysis and understand what they indicate.

These three broad goals will leave students in a position of being a better producer and consumer of statistics, both in reading and critiquing others' work, as well as appropriately conducting research. Also, reaching these goals will place students in a good position for the subsequent statistical courses that are taken during graduate training.

Student Learning Outcomes

1. Understand data distributions.
2. Learn about probability theory.
3. Conduct hypothesis testing.
4. Perform univariate and multivariate statistical analyses.
5. Learn how to use SPSS to conduct statistical analyses

Course Structure

The course will be structured in such a manner as to correspond to the goals mentioned above. Each student is required to complete the reading prior to class. The readings and the conceptual basis of statistical analyses will be covered during lectures. Examples and practice questions will be provided and worked through in order to facilitate understanding of the concepts and techniques. After each general concept is covered, that knowledge will be applied to data analytic problems using SPSS. This *hands-on* component will provide students with the opportunity to learn how to conduct statistical analyses.

Due to the complex nature of the material and assignments, all questions should be covered in person (class, lab, or office hours). This may prevent unnecessary confusion.

Course Assignments and Grading

Examinations – 60% of final grade

There are 3 exams in the course. The first exam covers chapters 1-5 and is worth 15% of the final grade. The second exam covers chapter 6-11, and chapter 16. It is worth 20% of the final grade. The last exam covers chapter 12-15 and the Sage greenbacks, and is worth 25% of the final grade. The exams include open-ended questions (answered in prose), performing statistical tests, and interpretation of statistical tests (including SPSS output).

Assignments – 40% of final grade

As indicated above, an applied approach to statistics is emphasized in this course. As such, there are 6 assignments to complete. Each assignment focuses on one or more statistical techniques that are covered in class. There are two components to the assignments. First, there is the technical component. This component is graded on whether the analysis is correctly conducted, and the interpretation is accurate. The second component focuses on the clarity with which the findings are reported. Given this bifurcated grading system, it is possible that the analysis and specific statistical information is correct, but it is poorly written. This will result in points being deducted even though a technically correct answer has been provided. The assignments are designed to provide students with an opportunity to apply statistical knowledge to data, and for the professor to assess how well each student is grasping the material. Under no circumstances are students allowed to work cooperatively with one another to complete the assignments. All assignments must be completed by each student individually. There may be times when a student has difficulty understanding a concept or procedure, or carrying out an analysis. If this occurs, ask the professor for assistance.

Course Grading Distribution and Scale

Grade Distribution	*Grading Scale*
Examinations (60%)	90% - 100% → A
Exam #1 (15%)	80% - 89% → B
Exam #2 (20%)	70% - 79% → C
Exam #3 (25%)	60% - 69% → D
Assignments (40%)	Below 60% → F
Assignment #1 (5%)	
Assignment #2 (5%)	
Assignment #3 (5%)	
Assignment #4 (5%)	
Assignment #5 (10%)	
Assignment #6 (10%)	

Course Policies
Classroom Expectations
1. The most important rule in this class is to respect one another. Each student is expected to treat all other students in the same manner as s/he wants to be treated.
2. There will be a diversity of opinions, interpretations, and experiences among the students in this course. Every student is expected to respect that diversity, and allow students to speak openly and freely.
3. Each student is expected arrive promptly at the scheduled class time. Occasionally situations arise that prevent this. If this appears to represent a pattern for any given student, that student will be required to meet with the professor to explain this behavior. The professor also reserves the right to require such a student to provide a written explanation for their behavior, with a focus on the negative consequences of tardiness for that student, the other students, and the professor.
4. Turn off (not vibrate) cell phones, pagers, and any other communication device before class begins.
5. Food and drink are not permitted, unless otherwise noted.
6. Students are required to direct their attention during class meetings to astutely listening to the lectures, taking notes, and actively participating in classroom exercises. It is not appropriate during class meetings to read, email, text, update social media, converse with classmates, work, or sleep.
7. Each student is required to behave professionally in this class. This includes, but is not limited to, making inappropriate comments, respecting boundaries surrounding the professor-student relationship, making unreasonable demands, or otherwise being disruptive or disrespectful.
8. Unethical behavior, including, but not limited to, a student cheating on an exam or handing in an assignment that is not the product of the student's own work, will result in a F. Any student who engages in unethical behavior might be dismissed from the School of Criminal Justice.
9. All policies and procedures as set forth in the *TSU Honor Code* (detailed below) will apply to this course.

Texas State University Honor Code

All faculty, staff and students are responsible for supporting the principles of conscientiousness, respectfulness and honesty and demonstrating a commitment to the university's Academic Honor Code. Plagiarism and other forms of academic dishonesty undermine the very purpose of the university and diminish the value of an education. Specific expectations for academic integrity and sanctions for academic dishonesty are outlined on the Honor Code Council website: http://www.txstate.edu/honorcodecouncil/, and in UPPS No. 07.10.01.http://www.txstate.edu/effective/upps/upps-07-10-01.html.

Policy Regarding Absences, Late Assignments, and Missed Assessments
Attendance is strongly encouraged. In the event of an absence, no student will be given the opportunity to earn credit toward an in-class assignment or an examination. The professor is not obligated and will not provide to any absent student lecture notes, class summaries, or any other information that was provided in class. The university has detailed policies regarding absences, including what constitutes an excused absence (see http://www.provost.txstate.edu/pps/policy-and-procedure-statements/4-teaching/pps4-01.html). In the event of a university-excused absence, the professor will follow the guidelines set forth by the university. Each student is expected to review, be familiar with, and follow the university's guideline regarding absences.

In the event of an emergency, it may be necessary for TSU to suspend normal operations. During this time, TSU may opt to continue delivery of instruction through alternative methods or scheduling. It is the responsibility of the student to monitor the TRACS site for each class for course specific communication, and the main Texas State University, College, and department websites, and emails for important general information.

Students are expected to notify their instructors at the beginning of each academic term if they intend to be absent for a class or examination. Students absent for religious reasons should notify the instructor preferably at the beginning of the semester, but no later than two weeks prior to the scheduled absence. For further information, please refer to: http://www.txstate.edu/effective/UPPS/UPPS-02-06-01.HTML

Requests for Information on Grades
Every effort will be made to promptly list the grades on TRACS. If any additional information related to grading is requested by a student, that student must schedule a time to meet with the professor. Grades and related issues will not be discussed via email or phone.

Policy Regarding Special Accommodations
If you are a student with a disability who will require an accommodation(s) to participate in this course, please contact the instructor as soon as possible. You will be asked to provide documentation from the Office of Disability Services. Failure to contact the instructor in a timely manner may delay your accommodations.

Disruption of Academic Process
Disruption of academic process is defined as the act or words of a student in a classroom or teaching environment which in the reasonable estimation of a faculty member: (a) directs attention from the academic matters at hand, such as noisy distractions, persistent, disrespectful or abusive interruptions of lecture, exam or academic discussions, or (b) presents a danger to the health, safety or well-being of the faculty member or students. Disruption of the classroom or teaching environment is unacceptable. This cannot be tolerated in the University community and will be punishable, according to the seriousness of the offense, in conformity with this rule.

Class Notes and Tape Recordings
Any student who wishes to tape record class lectures must first get permission from the instructor. Any recording, whether audio or written (i.e., class notes), can only be used by the individual who recorded them. No student has permission to sell or distribute any recording (in any form) made in the course.

Modifications to Course Schedule
While care and effort have been taken to delineate the activities and assignments throughout the semester, the professor reserves the right to modify the course schedule. Such modifications can occur at any time and as many times during the semester as the professor deems necessary. Students will be notified in class if such changes are made.

Tentative Course Schedule

Date	Topic	Reading
8/24	Introduction to course Review syllabus Course rationale Measurement/Types of Variables Reliability Validity Basic descriptive statistics Frequency distributions	Essentials 1 & 2
8/31	Measures of central tendency Measures of dispersion LAB	Essentials 3 & 4
9/7	**Labor Day – class cancelled**	
9/14	**Assignment #1 Due** Z-Scores Standardized distributions The normal curve	Essentials 5
9/21	**Exam #1**	
9/28	Inferential statistics Probability Sampling distribution LAB	Essentials 6 & 7
10/5	Hypothesis testing Chi-square (χ^2) LAB	Essentials 8 & 16
10/12	**Assignment #2 Due** T-statistic One-sample t-test Two-sample t-test Estimation LAB	Essentials 9, 10, 11, & 12
10/14**	**Assignment #3 Due**	
10/19	**Exam #2**	
10/26	ANOVA/ANCOVA MANOVA/MANCOVA LAB	Essentials 13 & 14

11/2	**Assignment #4 Due** Bivariate correlation Bivariate regression Partial correlation LAB	Essentials 15
11/9	Linear regression LAB	Understanding regression (Schroeder et al.) Applied regression (Lewis-Beck)
11/16	**Assignment #5 Due** Logistic regression LAB	Logistic Regression (Pampel)
11/23	**Assignment #6 Due**	
11/30	**Exam #3**	
12/7	Open/reserved (possible exam #3 date)	

**These dates are not when we normally meet