Department of Criminal Justice and Criminology

CRIJ 6385

Statistics for Criminal Justice Research

Spring 2018

Professor: H. Daniel Butler

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Class Hours: Thursday 1:00-3:50pm

Classroom: A213 – George J. Beto Criminal Justice Center

Office Hours: Tuesday/Thursday 9:30-10:45am and by appointment

Required Textbooks:
Bachman, R. D. & Paternoster, R. (2017). *Statistics for criminology and criminal justice*. 4th Edition. Thousand Oaks, CA: Sage Publications. (ISBN: 978-1-5063-2610-8).

Acock, A. C. (2016). *A gentle introduction to Stata*. 5th Edition. College Station, Texas: Stata Press. (ISBN: 978-1-59718-185-3).

- Some articles will also be uploaded to Blackboard. Please download and read the requested articles when instructed by the professor.

Required Materials:
Stata/IC, Stata/SE, or Stata/MP are required for this class. These different versions of Stata are available for pepetual use or they can be rented. These versions of Stata differ in the amount of observations that are permitted in a dataset, and they also differ by the number of processor cores that are used to analyze data. Students should not rent or purchase "small Stata" as it does not provide enough observations that would be useful for future research. More information (pricing and purchasing instructions) for each of the Stata versions can be found at the following website: http://www.stata.com/order/new/edu/gradplans/student-pricing/

Students must purchase or rent a version of Stata that can be used to complete the homework assignments. Please purchase or rent one of the approved Stata packages as soon as possible. Please let me know immediately if you have any questions about purchasing Stata.

Students will also need to download and install Dropbox, a free file hosting application, that will allow students to upload homework assignments (i.e., Stata do files and Microsoft Word documents).

Course Description:
The course is designed to provide an introduction to statistics, which includes an understanding of the most common methods that are employed to describe and compare data, the basic concepts of probability, generalizing from samples to populations, testing for significance, understanding correlations, and becoming familiar with basic regression analysis. Students should have a mastery of the conceptual and theoretical reasons regarding the appropriate use of basic statistics. Students should be able to synthesize and better understand empirical research across a variety of disciplines by understanding the fundamentals of basic criminal justice research. Together, these concepts will help students prepare for careers that may require an advanced understanding of research design and data management.

Course Learning Objectives:
Students that successfully complete the course should be able to:

1. Describe the basics of scientific research, such as hypotheses testing, variable construction, and units of observation.
2. Understand concepts of probability and how those concepts influence statistical analysis.
3. Identify and describe measures of central tendency.
4. Examine sampling distributions and describe sampling error.
5. Analyze empirical research that will strengthen an understanding of research methodology.
6. Describe data, make decisions regarding data, and determining relevant associations within data by use of statistical programs.

Course Requirements:

Students are expected to read the assigned material and come to class prepared to discuss the relevant readings. The structure of the class is lecture/discussion in addition to practicing Stata together in class. Reading the assigned material is essential in performing well throughout the semester. Students' grades will be based on three exams and 9 homework assignments.

Grading:

Exam 1	20 points
Exam 2	25 points
Exam 3	25 points
Homework Assignments (7 total)	30 points
Course Total	**100 points**

Course Exams:

Each student will be tested on their retention, understanding, and ability to grasp key concepts within the course. Students will have 1 hour and 15 minutes to complete the first exam, which will be comprised of short answer questions. Students will also complete two other exams that will be comprised of short answer questions in addition to using Stata to interpret and report statistical findings. Students will have the entire class time to complete the second and third exam.

Homework Assignments:

Homework assignments will be submitted prior to the start of class the week the assignment is due, and students will use Stata to analyze data and report findings. For instance, one homework assignment may task students with developing research questions and preparing data for analysis. All assignments must be completed in Microsoft Word and all statistical commands must be reported in a Stata do file. Students will submit Stata do files in addition to the written assignment prior to the start of class to Dropbox. Dropbox is a free program that hosts files on the cloud, which permits easy access to files across different computers.

Make-up Exam Policy:

For missed exams, there will be NO make-up exams in the absence of an extreme documented medical or personal emergency. In the case of such an emergency, I must be notified prior to the date of the exam. If early notification is not possible, please make sure that you contact me as soon as you are safely able to do so. Early notification and/or proper documentation does not necessarily guarantee that a make-up exam will be granted. This decision will be at my discretion, and the make-up exam will differ from the exam that is given to the class. In other words, the make-up exam will differ in structure (e.g., fill in the blank questions), and the questions themselves will be different.

Attendance Policy:

In accordance with Academic Policy Statement 800401, attendance will be taken regularly. Although attendance is not mandatory, please remember that your attendance is necessary to succeed in the class by taking notes and learning the class material. Therefore, I strongly recommend students attend class regularly to succeed. If you are unable to attend class, you are responsible for obtaining any information/material that you may have missed. Do not ask for my notes from any class that you missed. I will not, under any circumstances, give out my lecture notes.

Religious Holy Day Policy:

In accordance with SHSU policy 861001, students who wish to be absent from class on a religious holy day may provide a written statement to the professor concerning their absence. For a complete list of the university policy, see:
http://www.shsu.edu/~vaf_www/aps/documents/861001.pdf

Academic Etiquette:

In this class, you are required to conduct yourself in an appropriate, responsible, and professional manner. Disruptive behavior (in the form of arriving late/leaving early, private discussions with other students, cell phones, text messaging, disruptive newspaper reading, etc.) is not appropriate and will not be tolerated in this course. Students are expected to be respectful of others and when another student is speaking, do not interrupt that student. Please raise your hand if you have a question during class.

Academic Honesty:

Academic dishonesty in the form of cheating, falsification, fabrication, multiple submissions, plagiarism, and abuse of academic materials will not be tolerated. Students caught exhibiting such behavior will receive a failing grade in the course. If you have any questions with regard to what constitutes academic dishonesty (e.g., what is plagiarism/cheating?), please see me. For a complete listing of the university policy, see:

http://www.shsu.edu/~vaf_www/aps/documents/810213.pdf

Use of Telephones and Text Messages In Academic Classrooms and Facilities:

The use of electronic devises for telephone calls and text messaging during class-time is prohibited. Arrangements for handling potential emergency situations may be granted at my discretion. If you know that you are going to receive a call/text message regarding an emergency situation during this class, you must let me know before class begins. Failure to comply with this policy can result in expulsion from the classroom or with multiple offenses, failure of the course.

Any use of a telephone or text messager or any device that performs these functions during a test period is prohibited. These devices should not be present during a test. They must be stored securely in such a way that they cannot be seen or used by the student. EVEN THE VISIBLE PRESENCE OF SUCH A DEVICE DURING THE TEST PERIOD WILL RESULT IN A ZERO FOR THAT TEST. Use of these devices during a test is considered de facto evidence of cheating and could result in a charge of academic dishonesty. For a complete listing of the university policy, see: http://www.shsu.edu/~vaf_www/aps/documents/100728.pdf

Disability Accomadation:

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 adversely affect your work in this class, I encourage you to register with the SHSU Counseling Center 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 Counseling Center. For a complete listing of the University policy, see: http://www.shsu.edu/~vaf_www/aps/documents/811006.pdf

Class Schedule: The following schedule is tentative and subject to change if class runs short or a subject requires further discussion.

Date	Lecture	Assignment
January 18	Review syllabus and course expectations Introduction to Stata	Bachman & Paternoster (Chapters 1-3) Acock (Chapters 1-4)
January 25	Levels of measurement, understanding data distributions, and measures of central tendency	Complete Assignment #1 Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 5) Acock (Chapter 5)
February 1	Measures of central tendency (cont.) and measures of dispersion	Complete Assignment #2 Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 6) Acock (Chapter 6)
February 8	Probability	Study for Exam #1 Bachman & Paternoster (Chapter 7) Acock (Chapter 7)
February 15	**Exam #1** (1 hour and 15 minutes to complete) Point estimation and confidence intervals	Read articles uploaded to Blackboard Bachman & Paternoster (Chapters 8-9) Acock (finish Chapter 7)
February 22	Hypothesis testing for one population mean and with categorical data	Complete Assignment #3 Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 10-11) Acock (Chapter 9 – will come back to Chapter 8)
March 1	Hypothesis tests involving two population means and three or more population means	Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 12) Acock (Chapter 8)
March 8	Bivariate correlation and regression	Complete Assignment #4 Read articles uploaded to Blackboard
March 15	No Class – Spring Break	No Class – Spring Break
March 22	Bivariate correlation and regression (cont.)	Study for Exam #2
March 29	**Exam #2** (full class time)	Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 13) Acock (Chapter 10)
April 5	Multiple regression	Complete Assignment #5 Read articles uploaded to Blackboard
April 12	Multiple regression (cont.)	Complete Assignment #6 Read articles uploaded to Blackboard Bachman & Paternoster (Chapter 14) Acock (Chapter 11)
April 19	Logistic regression	Read articles uploaded to Blackboard
April 26	Logistic regression (cont.)	Complete Assignment #7 Read articles uploaded to Blackboard

		Acock (Chapter 13)
May 3	Missing Data	Study for Exam #3
May 10	**Exam #3** (full class time) Thursday, May 10 – 2:30-4:30pm	**Exam #3** (full class time)