Florida State University
College of Criminology and Criminal Justice
CCJ 4746: Statistics for Criminology and Criminal Justice
Time: MWF from 8:00am-8:50am
Location: Eppes Hall, CRM 0409 or Zoom
Join URL: https://fsu.zoom.us/j/92224586549

Instructor: Megan Bears Augustyn, PhD
Office Hours: MW 12:00-1:00pm by Zoom or by appointment 😊
Office: CRM 0302B (not in residence in Spring 2023)
Phone: Forthcoming
Contact Information: Email: maugustyn@fsu.edu (please use CCJ 4746 as the subject
                         line to increase probability that your email will be read with
                         urgency and not overlooked). Please do not email me through
                         Canvas because I do not trust those emails always go through in a
                         timely manner
Course Website: https://canvas.fsu.edu/courses/229190
Teaching Assistant: Nan Li, MA (nli@fsu.edu)

Course Overview:
This purpose of this introductory course is to provide you with a foundation and
familiarity in the world statistics. The first part of this course will focus on descriptive
statistics, which are used to describe a social phenomenon of interest. The second part of
this course will cover inferential statistics, which are used to "infer" relationships
between different phenomenon of interest, measured as variables, and generalizing these
relationships to larger populations from which the samples are drawn. Both of these
skills are complementary and all of the examples in this class will use crime data and deal
with issues within the fields of criminology and criminal justice.

By the end of this course, you should have an understanding of the following statistical
concepts and operations.
1. Basic differences between nominal, ordinal, interval, and ratio variables.
2. Descriptive statistics such as mean, median, mode, variance, and standard
   deviation (all of which can be used to numerically describe central tendency,
   dispersion and the skew of data).
3. Theoretical differences between sample and population differences.
4. The standard normal distribution.
5. Hypothesis tests using the normal distribution.
6. Hypothesis tests using a binomial distribution.
7. Statistical significance/hypothesis tests including:
   a. Z-tests for large samples
   b. Z-tests for small samples
   c. T-tests with one mean.
   d. T-tests with two means.
   e. Chi-Square statistics for categorical data.

f. Measures of Association with categorical data.
g. F-tests with three sample means.
h. Correlations and bivariate ordinary least squares regression
i. Multivariate ordinary least squares regression

Required Textbook:
Bachman, R. and R. Paternoster. *Statistical Methods for Criminology and Criminal Justice.* McGraw-Hill 2009. 3rd Edition. (ISBN 9780073129242)

Required Software:
Stata 17 SE Available for free at https://its.fsu.edu/service-catalog/desktop-and-mobile-computing/its-software/myfsuvlab

Required Materials:
Calculator

Course Grading:
The ultimate goal of this course is for you to do well on your exams (4). In order to do well on your exams, it is extremely important that you keep up with the reading, class lectures, and homework assignments. Office hours with the instructor and the teaching assistant are also available to help you with the material.

- Attendance – 5%
- Homework – 15%
- Exam 1 – 20%
- Exam 2 – 20%
- Exam 3 - 20%
- Exam 4 – 20%

Homework: The goal of each homework assignment is to help you practice the material covered in the text and during lecture. Each homework assignment will be posted on Canvas one week before it is due. The following policies will be in place to ensure fairness in the homework process.

1. Homework assignments (11) will be given almost every other week. Only 10 will be graded. If you decide to complete all 11 homework assignments, then your top 10 scores will be used to calculate your homework grade. Otherwise, you have the opportunity to not complete one homework assignment and not be penalized in your homework grade.
2. Homework must be submitted through Canvas before the start of class (8am) on the day that it is due. Homework will not be accepted after 8am on the day that it is due.
3. There are only a few circumstances where homework will be accepted late. Late is defined as homework turned in any time after 8am on the day that it is due. An excused absence and the acceptance of late homework (e.g. illness,

medical emergency, death in the family) will require written documentation. Otherwise, late assignments will NEVER be accepted.

4. Homework assignments can be typed in the Microsoft Word document or they can be written/typed in the Word document. If you are doing hand written assignments, please scan and upload the full assignment as one document in Canvas. Anything handwritten must be readable for me to grade it. If I cannot read it, then you will not get any credit.

Exams: There will be four exams given during this class. The first three exams will take place IN CLASS on the assigned date. The final exam will be through Canvas during Finals Week. Each exam will test the student on the material covered during the previous portion of the course. Due to the nature of the material, the exams will be cumulative but only as much as skills tested in the previous exam are used to complete newly taught statistical skills.

Extra Credit: Extra credit opportunities will be randomly given and there will be one extra-credit question on each exam.

Grade Distribution*

100-97	A+		79-77	C+
97-93	A		77-73	C
92-90	A-		72-70	C-
89-87	B+		69-67	D+
87-83	B		67-63	D
82-80	B-		62-60	D-

Any grades below 60% will receive an F for the course.

*All grades will be rounded up to the next percentage point from the .5 mark (e.g. 86.5 will become an 87/B+)

Class Policies:
- **Attendance** – All students are expected to attend every class. Since exams cover reading, lectures, and homework, missing multiple classes will likely result in a reduced final grade. If you do miss a class, you should always copy notes from a classmate. Basic outlines of the class notes will be provided on Canvas prior to each lecture, but these will be largely incomplete. The instructor will not share her complete notes (but I will meet with you to discuss the material if you have any questions _and_ you have already sought class notes from another student).
- **Make-up Policy** – Make-up exams will not be given except in cases of a documented medical problem/emergency, death in the family, or a religious holiday. Proper written documentation is required. In such cases, the student must contact the instructor before class. Failure to abide by these rules will result in a grade of zero.
- **Disability Support** – Any student with a documented disability (it must be documented by Office of Accessibility Services) must provide this documentation

to the instructor. Out of fairness to all students, I will not accommodate students who do not provide me with written documentation. Students who are requesting to take their exams in an alternative location need to provide the instructor with a testing form for each exam that must be turned in no later than one week before each exam. Otherwise, the student is expected to take the exam at the same time as the rest of the class.

- **Religious Observances** – If you are unable to take any exams or turn in any assignments due to a religious observance, you will need to discuss this with me at least one week prior to the due date/exam date.
- **Academic Integrity** – Students are expected to adhere to Florida State University's Academic Honor Policy (https://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy). Academic dishonesty will not be tolerated and any violations will be reported to the FDA office by the instructor. If deemed severe enough, the student will then be referred to the Academic Honor Policy Committee at FSU. Academic dishonesty includes cheating, fabrication of information used in assignments, plagiarism, and knowingly facilitating the dishonesty of another student.
- **Classroom Code of Conduct** – Students are required to be courteous to one another and to the instructor. Any student who engages in disruptive behavior will be asked to leave the classroom and will lose classroom participation points in addition to an additional point from one's final grade. Being disruptive includes repeatedly coming late to class (in person or online), leaving the classroom during lecture without authorization (in person or online), making loud or distracting noises (in person or online), sleeping, speaking without being recognized, reading outside material, and talking on cell phones or text messaging.
- **Copyright** – The lectures I deliver in this class and the course materials I create and distribute are protected by federal copyright law. My lectures are delivered from written lectured notes in order to ensure my copyright protection. You are permitted to take notes from my lectures and to use course materials for this class. You may not record, reproduce, or distribute my lectures/notes for any commercial purpose without my written consent. Persons who sell or distribute copies or modified copies of my course materials, possess commercial copies of my notes, or assist another person or entity in selling or distributing those materials will be reported to the university.
- **Inclement Weather Policy** – In the event of school cancellation due to inclement weather, the class will be rescheduled (potentially in a different format). I will announce the exact date/time/format as soon as possible through email. I will choose the best option that suits the majority's schedule.

Schedule, Reading, and Assignment List*
Subject to change as necessary throughout course. Please check Canvas and University email addresses for updates. All changes will also be announced in class.

Class	Class Topics/Events	Assigned Reading	Homework Due
Monday 1.9.23	• Course Introduction		
Wednesday 1.11.23	• Populations and Samples • Descriptive and Inferential Statistics	Chapter 1 pp. 1-15	
Friday 1.13.23	• Sampling Techniques • Validity	Chapter 1 pp. 15-18	
Monday 1.16.234	No Class MLK Holiday		
Wednesday 1.18.23	• Units of Analysis • Variables • Levels of Measurement	Chapter 2 pp. 24 -34	
Friday 1.20.23	• Counts, Rates, Proportions, and Percentages	Chapter 2 pp. 34-40	
Monday 1.23.23	• Stata Lab	Chapter 2 pp. 38-40	HW #1 Due
Wednesday 1.25.234	• Displays of Data • Stata Lab	Chapter 3 pp. 45-65	
Friday 1.27.23	• Displays of Data • Stata Lab	Chapter 3 pp. 45-65	
Monday 1.30.23	• Data Distributions	Chapter 3 pp. 63-65	HW #2 Due
Wednesday 2.1.23	• Measures of Central Tendency	Chapter 4 pp. 79-97	
Friday 2.3.23	• Review Measures of Central Tendency • Stata Lab	Chapter 4 pp. 79-97	
Monday 2.6.23	• Measures of Dispersion: Variance Ratio • Measures of Dispersion: Range and Interquartile Range	Chapter 5 pp. 105-114	HW #3 Due
Wednesday 2.8.23	• Measures of Dispersion: Variance and Standard Deviation	Chapter 5 pp. 114-132	
Friday 2.10.23	• Measures of Dispersion: Variance and Standard Deviation • Stata Lab	Chapter 5 pp. 114-132	

Day/Date	Topics	Reading	Assignment
Monday 2.13.23	• Catch-up • Review for Exam 1		HW #4 Due
Wednesday 2.15.23	Exam 1 Over Chapters 1-5 IN CLASS		
Friday 2.17.23	• Probability • Binomial Distribution	Chapter 6 pp. 150-172	
Monday 2.20.23	• Standard Normal Distribution	Chapter 6 pp. 172-188	
Wednesday 2.22.23	• Central Limit Theorem • Sampling Distributions	Chapter 6 pp. 181-188	
Friday 2.24.23	• Confidence Intervals Large and Small Samples	Chapter 7 pp. 198-213	
Monday 2.27.23	• Estimating Confidence Intervals for Proportions and Percentages	Chapter 7 pp. 213-217	
Wednesday 3.1.23	• Introduction to Hypothesis Testing – Directional and Non-directional hypotheses	Chapter 8 pp. 223-242	HW #5 Due
Friday 3.3.23	• Hypothesis Tests for Single Population Means • Large Population Z-test	Chapter 8 pp. 223-247	
Monday 3.6.23	• Hypothesis Tests for Single Population Means • Small Population T-test • Stata Lab	Chapter 8 pp. 243-253	
Wednesday 3.8.23	• Catch-up and Review for Exam 2		HW #6 Due
Friday 3.10.23	Exam 2 (Chapters 6-8) IN CLASS		
Monday 3.20.23	• Contingency Tables and Chi-square	Chapter 9 pp. 264-280	
Wednesday 3.22.23	• Strength of Relationship between Two Categorical Variables	Chapter 9 pp. 280-290	
Friday 3.24.23	• Review • Stata Lab		
Monday 3.27.23	• Hypothesis Tests with Two Independent Sample Means	Chapter 10 pp. 301-322	HW #7 Due
Wednesday 3.29.23	• Hypothesis Tests with Two Dependent Sample Means	Chapter 10 pp. 322-232	
Friday 3.31.23	• Hypothesis Tests with Two Sample Proportions • Stata Lab	Chapter 10 pp. 332-337	
Monday	• ANOVA (Part 1)	Chapter 11 pp. 345-	HW #8 Due

4.3.23		353	
Wednesday 4.5.23	• ANOVA (Part 2)	Chapter 11 pp. 353-367	
Friday 4.7.23	• ANOVA (Part 3) • Stata Lab	Chapter 11 pp. 345-267	
Monday 4.10.23	• Catch-up and Review for Exam 3		HW #9 Due
Wednesday 4.12.23	Exam 3 (Chapters 9-11) IN CLASS		
Friday 4.14.23	• Scatterplots • Correlation Coefficients	Chapter 12 pp. 377-397	
Monday 4.17.23	• OLS and Slope Coefficient • Comparing r and b	Chapter 12 pp. 397-411	
Wednesday 4.19.23	• Problems with r and b • Stata Lab	Chapter 12 pp. 411-423	
Friday 4.21.23	• Multiple OLS (Part 1)	Chapter 13 pp. 433-446	HW #10 Due
Monday 4.24.23	• Multiple OLS (Part 2) • Stata Lab	Chapter 13 pp. 446-473	
Wednesday 4.26.23	• Logistic Regression	Chapter 14 pp. 483-514	
Friday 4.28.23	• Stata Lab • Review for Final Exam (Exam 4)		HW #11 Due
Wednesday 5.3.23 - Final Exam Due in Canvas (Exam 4): 9:30am			