

Florida State University
College of Criminology and Criminal Justice
CCJ 4746: Statistics for Criminology and Criminal Justice
Time: Tuesday/Thursday from 9:45am-11:00am
Location: Bellamy Hall, BEL 0209
Class Zoom: <https://fsu.zoom.us/j/91009912491>

Instructor: Megan Bears Augustyn, PhD
Office Hours: W 10:30-1:00pm or by appointment/zoom 😊
Office: CRM 0302B
Phone: 850-645-5074
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/244750>

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

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/myfsuvsu>

Required Materials:

Calculator (not your cell phone)

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 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 (9) will be given almost every other week. All will be graded but only 8 will be counted towards your final homework grade. If you decide to complete all 9 homework assignments, then your top 8 scores will be used to calculate your homework grade. This means that 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 (9:45am) on the day that it is due. Homework will not be accepted after 9:45am 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 9:45am on the day that it is due. Late homework will only be accepted in the case of a documented emergency (e.g. documented illness, documented medical emergency, death in

the family). Travel, appointments, etc. will not be considered an “emergency”. Otherwise, late assignments will NEVER be accepted.

4. Homework assignments can be typed in the Microsoft Word document or they can be hand on the WORD document. If you are doing hand-written assignments, please scan and upload the full assignment as one document when you submit it in Canvas. Anything handwritten must be readable for me to grade it. If I cannot read it, then I cannot grade it and you WILL NOT get 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 FSU email addresses for updates. All changes will also be announced in class.

Class	Class Topics/Events	Assigned Reading	Homework Due
Tuesday 8.29.23	<ul style="list-style-type: none"> • Course Introduction 		
Thursday 8.31.23	<ul style="list-style-type: none"> • Populations and Samples • Descriptive and Inferential Statistics • Validity 	Chapter 1 pp. 1-18	
Tuesday 9.5.23	<ul style="list-style-type: none"> • Units of Analysis • Variables • Levels of Measurement 	Chapter 2 pp. 24 -40	
Thursday 9.7.23	<ul style="list-style-type: none"> • Counts, Rates, Proportions, and Percentages • Displays of Data • Stata Lab 	Chapter 3 pp. 45-71	
Tuesday 9.12.23	<ul style="list-style-type: none"> • Measures of Central Tendency • Measures of Dispersion: Variance Ratio • Stata Lab 	Chapter 4 pp. 79-97 Chapter 5. pp. 105-114	HW #1 Due
Thursday 9.14.23	<ul style="list-style-type: none"> • Measures of Dispersion: Variance and Standard Deviation 	Chapter 5 pp. 112-140	
Tuesday 9.19.23	<ul style="list-style-type: none"> • Review for Exam 1 		HW #2 Due
Thursday 9.21.23	Exam 1 (Chapters 1-5) IN CLASS		
Tuesday 9.26.23	<ul style="list-style-type: none"> • Probability 	Chapter 6 pp. 150-162	
Thursday 9.28.23	<ul style="list-style-type: none"> • Binomial Distribution • Standard Normal Distribution 	Chapter 6 pp. 162-180	
Tuesday 10.3.23	<ul style="list-style-type: none"> • Central Limit Theorem • Stata Lab 	Chapter 6 pp. 181-188	HW #3 Due
Thursday	<ul style="list-style-type: none"> • Confidence Intervals Large 	Chapter 7 pp. 198-	

10.5.23	and Small Samples	213	
Tuesday 10.10.23	<ul style="list-style-type: none"> • Estimating Confidence Intervals for Proportions and Percentages • Stata Lab 	Chapter 7 pp. 213-217	
Thursday 10.12.23	<ul style="list-style-type: none"> • Catch-up and Review for Exam 		HW #4 Due
Tuesday 10.17.23	Exam 2 (Chapters 6-7) IN CLASS		
Thursday 10.19.23	<ul style="list-style-type: none"> • Introduction to Hypothesis Testing, Types of Error, and Directional and Non-directional hypotheses • Hypothesis Test with Binomial Probability Distribution 	Chapter 6 pp.165-172	
Tuesday 10.24.23	<ul style="list-style-type: none"> • Hypothesis Tests for Single Population Means: Large Population Z-test 	Chapter 8 pp. 225-243	
Thursday 10.26.23	<ul style="list-style-type: none"> • Hypothesis Tests for Single Population Means: Small Population T-test • Hypothesis Tests for Proportions of Percentages 	Chapter 8 pp. 243-253	HW #5 Due
Tuesday 10.31.23	<ul style="list-style-type: none"> • Stata Lab • Contingency Tables/Joint Distributions • Chi-square test of Independence 	Chapter 9 pp. 264-280	
Thursday 11.2.23	<ul style="list-style-type: none"> • More Practice with Chi-square 	Chapter 9 pp. 264-280	HW #6 Due
Tuesday 11.7.23	<ul style="list-style-type: none"> • Measures of Association Strength of Relationship between Two Categorical Variables • Correlation Coefficients for Two Ratio Level Variables 	Chapter 9 pp. 280-290 Ch 12. Pp. 377-396	
Thursday 11.9.23	<ul style="list-style-type: none"> • Review for Exam 3 		HW #7 Due
Tuesday 11.14.23	Exam 3 (Chapters 6, 8-9) IN CANVAS posted at 9:30am and due by 12pm EST		
Thursday 11.16.23	NO CLASS- AMERICAN SOCIETY OF CRIMINOLOGY METINGS IN PHILADELPHIA		
Tuesday	<ul style="list-style-type: none"> • Hypothesis Tests with Two 	Chapter 10 pp. 301-	Zoom Class

11.21.23	Independent Sample Means: Equal and Unequal variances • ZOOM CLASS	332	
Thursday 11.23.23	NO CLASS - THANKSGIVING		
Tuesday 11.28.23	<ul style="list-style-type: none"> • Hypothesis Tests with Two Dependent Samples • Hypothesis Tests with Two Sample Proportions • Stata Lab 	Chapter 10 pp. 322-345	
Thursday 11.30.23	<ul style="list-style-type: none"> • ANOVA (part 1) 	Chapter 11 pp. 345-367	HW#8 Due
Tuesday 12.5.23	<ul style="list-style-type: none"> • ANOVA (part 2) 	Chapter 11 pp. 345-367	
Thursday 12.7.23	<ul style="list-style-type: none"> • Review for Exam 4 		HW#9 Due
Tuesday 12.12.23 – Final Exam Due in Canvas (Exam 4): posted at 7:30am and due by 11am EST			