Sample Syllabus

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CRIMIN 2220: Statistical Analysis in Criminology and Criminal Justice

Instructor:	Faraneh Shamserad
Office:	528 Lucas Hall
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Student Hours:	Email to arrange a time to meet in person or on Zoom
Class Location:	**415 Clark Hall**
Class Time:	Mondays and Wednesdays, 12:30PM - 1:45PM
Lab Location:	**107 Express Scripts Hall**
Lab Time:	Wednesdays, 2:00PM - 2:50PM

Course Description
This course is designed to introduce students to descriptive and inferential statistics used in criminology and other social sciences. We will cover measures of central tendency and variation, probability distributions, hypothesis testing, and bivariate techniques such as correlation and an introduction to regression. This class has a concurrent lab as part of the course, which focuses on software applications of the statistical concepts using Microsoft Excel. **Prerequisites**: CRIMIN2210 (may be taken concurrently) and the university math proficiency requirement. **NOTE**: Criminology and Criminal Justice majors must successfully complete this class (CRIMIN 2220) with a minimum grade of (C-) per your degree requirements.
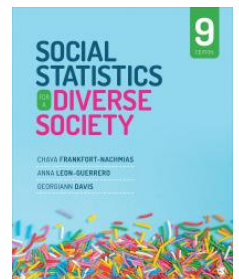
Learning Objectives
- Critically read and understand descriptive and inferential statistical concepts;
- Apply statistical concepts to social science real-world examples;
- Build a solid foundation for more advanced statistical techniques.

Required Texts and Materials
1) Textbook: Frankfort-Nachmias, Chava, Leon-Guerrero, Anna, and Davis, Georgiann. (2021). Social Statistics for a Diverse Society. (9th edition). The book is in paper and electronic format. The paperback ISBN is: 9781544339733. The electronic ISBN is: 9781544358666. You are also welcome to use older editions of the book—just make sure you are following the same chapters and are doing the correct homework problems. **Copies of the homework problems are available on Canvas**.

2) Calculator: a **non-cellphone** calculator to use for in-class exercises and **is mandatory for exams.** A graphing calculator is fine but not required—it just needs to be able to do squares and square roots.

3) Microsoft Excel: Microsoft Excel is available on all campus computers. If you wish to use your personal laptop for the labs, you should be able to access Microsoft Office 365 available for free as an UMSL student (you'll need to log in with your SSO).

Course Conduct

1) Please turn off all electronic devices, including cell phones and computers, as they distract from the course. Laptops are only allowed during the lab.

2) You are responsible for taking notes—if you miss class, you are responsible for getting notes from a friend. I will post my slides on Canvas after each class.

3) **Attendance is required**. This is an active course that involves participation in the labs and classes, reading the required materials, and completing the assignments. Please notify me beforehand if you have an excused absence. I realize emergencies (i.e. hospitalization, family death, jail) come up from time to time—I am happy to make reasonable accommodations, but you must take responsibility for the material missed. For non-emergency absences, you are still responsible for turning in the homework to me by 5pm on the day due (either with a friend, in my mailbox, or scanned via email) if you miss class. Unexcused absences will also affect your participation grade.

4) Students who need disability accommodations should come see me as soon as possible. I will happily make accommodations through the Office of Disability Services.

5) I take the Student Conduct & Community Standards Code seriously, and I suggest you review it beforehand. Not knowing is not an excuse! Academic dishonesty includes cheating, plagiarism, and collusion.

6) The Math Academic Center offers free assistance on a walk-in basis to students.

Course Grading

Students will be graded on the basis of the following criteria: homework assignments, lab assignments, participation, and two exams. The specific breakdown is as follows, with details provided below:

Homeworks	50%
Exams	30%
Lab assignments	10%
Participation	10%
	100%

1. **Homeworks:** these will consist of problems from the textbook. They are listed under "chapter exercises" at the end of each chapter and start with C (e.g. C1, C2, C3, etc.) These can be handwritten or typed. You must show all of your work and box your final answer—if the problem requires calculation, I will only give credit to assignments that show all of the steps to the final answer (even if your answer is correct!) Homework assignments in general will be due in class the week after the chapter is covered. Unexcused late assignments will be

given half credit and will not be given feedback and can be turned in up to ONE WEEK after the due date. After that time, they are worth zero points. **Homework assignments are to be turned into me at the end of class on the day they are due.** Each homework assignment is worth **10 points**.

2. **Exams:** there will be two exams, covering about half of the class material each. They are not cumulative, although concepts in the second exam of the class build from the first part. The exams will be closed book, although you will be allowed to bring in one 5 x 8 index card (double-sided) with notes as a "cheat sheet" to each exam, which will be collected with the exam. I will provide the index cards. The exams will integrate material from the lecture and the book. Each exam is worth **40 points**.

3. **Participation:** We will be doing class participation activities throughout the course, and you are expected to participate in these. Because these are in-class activities, they cannot be made up if you miss them. Each participation activity is worth **1 point**.

4. **Lab:** Your lab grade will include participating in and completing the Excel exercises that follow the course material. Weekly lab assignments will be **due each Wednesday by the beginning of lab**. You will submit two documents via Canvas: your lab assignment and Excel workbook. Unexcused late assignments can be turned in up to ONE WEEK after the due date and will be given half credit and will not be given feedback. In order to receive full credit, all questions on assignments must be answered. Incomplete lab assignments will be given no credit. Each lab assignment is worth **5 points**.

Grade Categories

93.5 +	A	73.5-76.4	C
89.5-93.4	A-	69.5-73.4	C-
86.5-89.4	B+	66.5-69.4	D+
83.5-86.4	B	63.5-66.4	D
79.5-83.4	B-	59.5-63.4	D-
76.5-79.4	C+	Below 59.5	F

Course schedule—subject to change depending on time demands, adverse weather, etc.

Week	Concept/topic	Reading	Assignments
Week 1 Jan 18	Introduction to course and syllabus.		
Week 2 Jan 23 - Jan 25	What is statistics?	Ch. 1	
Week 3 Jan 30 - Feb 1	Organization/graphic presentation of data	Ch. 2	Homework 1: ch. 1: C3, C6, C8, and ch. 2: C2, C6, **due Feb 8**
Week 4 Feb 6 - Feb 8	Measures of central tendency	Ch. 3	
Week 5 Feb 13- Feb 15	Measures of variability	Ch. 4	Homework 2: ch. 3: C2, C8, C12, and ch. 4: C8, C12 (calculate standard deviation) **due Feb 22**
Week 6	The normal distribution	Ch. 5	

Feb 20 - Feb 22			
Week 7 Feb 27- Mar 1	The normal distribution	Ch. 5	Homework 3: ch. 5: C4, C6, C8, C12, **due March 8**
Week 8 Mar 6 - Mar 8	Sampling and intro to inferential statistics	Ch. 6	
Week 9 Mar 13 - Mar 15	Catch up & review **Exam 1 (covering ch. 1-5)**		**Exam 1 on March 15**
Week 10 Mar 20 - Mar 22	Estimation and confidence intervals	Ch. 7	
Mar 25 - Apr 2	Spring Break		
Week 11 Apr 3 - Apr 5	Estimation and confidence intervals	Ch. 7	Homework 4: ch. 7: C2, C4, C6a, C10, C12 **due April 12**
Week 12 Apr 10 - Apr 12	Testing hypotheses	Ch. 8	
Week 13 Apr 17 - Apr 19	Testing hypotheses	Ch. 8	Homework 5: ch. 8: C2, C4, C6, C8 **due April 26**
Week 14 Apr 24 - Apr 26	Bivariate tables & Chi-square	Ch. 9 (p.281-292) & Ch.10 (p. 327-340)	Homework 6: ch. 10: C2, C4, C5 (conduct chi-square test), C8 (not d), **due May 3**
Week 15 May 1 - May 3	Regression and correlation Catch up and review	Ch. 12	
Finals week **May 8 - May 12**	**Exam 2 (covering ch. 6-10)**		**Exam 2 on May 10**