

# CRCJ 3000 – Applied Statistics

*University of Nebraska at Omaha*

## COURSE INFO

**Room:** CPACS 222

**Time:** 11:30am – 12:45pm (M/W)

**Dates:** Aug 21<sup>st</sup> – December 15<sup>th</sup>

## INSTRUCTOR INFO

**Name:** Laramie Sproles, M.A.  
(She/Her/Hers)

**Email:** [lsproles@unomaha.edu](mailto:lsproles@unomaha.edu)

**Office Hours:** By Appointment  
(Zoom or in person)

**Email is the best way to reach me.**

I usually respond to emails M-F within 24 hours. It may take me longer to respond on weekends and breaks.

## READING MATERIALS

**Required Book:** Gau, J.M. (2019). *Statistics for Criminology and Criminal Justice (3<sup>rd</sup> ed)*. Los Angeles, CA: SAGE Publications.

ISBN: 9781506391786

Additional readings and resources will be provided in Canvas under the relevant module.

## INTRODUCTION & OBJECTIVES

**Course Introduction:** The primary goal of this course is to facilitate your understanding of the use of data and statistical methods used to make inferences about society. While I don't expect you to walk away from this course as a statistician, this class should give you the tools to critically evaluate statistics when they are presented to you in other classes, at work, or even on TV.

**Learning Objectives:** Upon completing the course, students will be able to:

- Understand the different types of variables and measurement techniques.
- Describe and apply basic statistical methods.
- Identify key statistical terms and symbols, such as null, standard deviation, Type I and Type II errors, validity, and reliability.
- Read, understand, and critique presented data and statistics in research articles.

**Course Expectations:**

1. All students are expected to be respectful and professional to one another. Learning is best done when we all feel safe to ask questions, make mistakes, and express our unique perspectives.
2. I expect all students to be prepared and active participants in class. This means you will complete all reading assignments and review additional lecture materials. All assignments should be turned in on time.
3. Late assignments will not be accepted except in rare circumstances.
4. "Incomplete" final grades are only allowed in exceptional circumstances. Students who believe they will require an incomplete will work with the instructor and the Director of the School of Criminology and Criminal Justice to determine whether this grade shall be issued.
5. Procedures for dropping/adding this course follow general UNO policies, which can be found at: [http://registrar.unomaha.edu/drop\\_add.php](http://registrar.unomaha.edu/drop_add.php).

**Methods of Instruction:** This class includes a combination of lectures, discussions, videos, in-class activities, and concept application assignments. Participation is an important aspect of class and in my experience, one of the best ways for students to make the most out of our time together. While I encourage (and expect) you to speak up in class, please remember that active and supportive listening is also a valuable form of participation. *For the days you do not feel like speaking up, you can participate by showing your instructor and your classmates you are listening.* Along with showing up to class, students are expected to ask questions and participate in discussions.

While I do not grade attendance or participation, **students who are not active participants in class will not be eligible for deadline extensions, assignment redo opportunities, or extra credit opportunities** (if offered). **I will notice if you are not in class or if you are in class but are not paying attention.** Not paying attention includes cell phone use, sleeping, staring off into the abyss, and using your computer or tablet for anything other than class related activities. I understand that life happens and you may need to miss all or part of a class. Please communicate that with me! Occasional absences or rough days are understandable. Absences and not participating are only an issue if they become a reoccurring theme.

## ASSIGNMENTS & GRADING

**Chapter Review Assignments (50 points):** Students will complete 10 chapter review assignments over the course of the semester. Each assignment is worth 5 points and contains questions worth between 0.5 and 2.5 points each.

All chapter review assignments will be completed on Canvas and can be found under the module for that week. You can only submit the assignment once, but you can take as much time as you need. Assignments on Canvas must be completed by 11:59pm on Sunday each week.

**Chapter Math Uploads (8 points):** Eight of your weekly chapter review assignments will require you to complete math calculations by hand. If math is required, you will need to take a picture of your hand-written calculations and submit them to me via the corresponding math upload assignment. You may also hand in your work in person on the Monday after the assignment is due if you prefer. By submitting these assignments, I can give partial credit on your review assignments if your math is correct even though your answer is not.

**Exams (42 points):** There will be two exams this semester: Exam 1 (in-person, 21 points) over chapters 1-8 and a final exam (take home, 21 points) over chapters 9-13. Details will be provided closer exam day.

Grading Scale		
Assignments	Points	%
10 Chapter Review Assignments	50	50%
8 Math Uploads	8	8%
2 Exams	42	42%
<b>Total</b>	<b>100</b>	<b>100%</b>
Points Required	Percentages	Letter
100 – 97	100-97%	A+
96 – 93	96-93%	A
371 – 360	92-90%	A-
359 – 348	89-87%	B+
347 – 332	86-83%	B
331 – 320	82-80%	B-
319 – 308	79-77%	C+
307 – 292	76-73%	C
291 – 280	72-70%	C-
279 – 268	69-67%	D+
267 – 252	66-63%	D
251 – 240	62-60%	D-
≤ 239	Below 60%	F

## UNIVERSITY & COURSE POLICIES

**Services For Students With Accessibility Issues:** Reasonable accommodations are provided for students who are registered with Accessibility Services Center (ASC) and make their requests sufficiently in advance. For more information, contact ASC (Location: H&K 104, Phone: 402.554.2872, Email: [unoaccessibility@unomaha.edu](mailto:unoaccessibility@unomaha.edu)).

**Technology Policy:** Laptop and tablet use is allowed for note-taking purposes, but you are expected to refrain from checking email or browsing the web during class. Cell phone use is prohibited in class and will result in the docking of participation points. I understand that we are all adults with responsibilities that may require phone use. If an emergency situation arises where you need to be on your phone in class, please let me know before class begins or as soon as possible.

**Behavior Expectations/Prohibited Conduct:** I expect every student to be respectful in my classroom. **Any action that makes the environment of our classroom hostile for others will not be tolerated.** All students in this course are expected to conduct themselves in a manner consistent with the guidelines laid out in the UNO Student Code of Conduct (available at <http://www.unomaha.edu/student-life/student-conduct-and-community-standards/docs/Code-of-Conduct-2015-with-appendix.pdf>). The Code of Conduct explicitly defines academic code violations (e.g., cheating, plagiarism, etc.) as well as prohibiting behavior such as threats, intimidation, coercion, and abuse (physical or mental). Any behavior which occurs in this class that fits these definitions will be considered grounds for removal from the class. **Lack of knowledge of the definitions and explanations listed in the Code of Conduct is not an excuse for not following the Code of Conduct.**

**Late Work:** Due to the amount of flexibility and assistance students are given in this course, **late work will not be accepted** except in emergency circumstances. Assignments will be announced in class and posted on Canvas well in advance of the due dates, and there are scheduled in-class work days for a few of the bigger projects. If an emergency situation arises (serious family, medical, or personal issues), contact the instructor as soon as possible to establish a reasonable timeline for the completion of work.

**Plagiarism** - In this course, you may submit written work in which you make use of information and ideas found in print or online sources. Whenever you use material from another writer, it is important that you quote or paraphrase appropriately and cite the source. Never let it appear that ideas and information gleaned from other sources are your own. The UNO Academic Integrity policy defines plagiarism as “presenting the work of another as one’s own (i.e., without proper acknowledgment of the source) and submitting academic work in whole or in part as one’s own when such work has been prepared by another person or copied from another person.” Failure to cite sources appropriately is plagiarism, a serious academic offense. Plagiarized work will not be accepted. Consequences for plagiarism are up to the discretion of the instructor; they may range, for example, from rewriting all or part of a paper to a grade of F for the course. Students who plagiarize more than once are subject to disciplinary action, which may include expulsion from the university. If you have a question about using or citing another writer’s work, **DO NOT GUESS**. Check with your instructor or a consultant at the UNO Writing Center. Bring a printout of the original source and your paper to the consultation.

**The UNO Academic Integrity Policy** can be found at: <https://www.unomaha.edu/student-life/studentconduct-and-communitystandards/policies/academic-integrity.php>

**Assistance:** UNO offers many resources that can assist you with a variety of needs. I have listed a few pertinent resources, all of which can be used free of charge. If you have other issues for which you need assistance that are not covered below, please feel free to talk to me. If I cannot provide assistance, I will help you find someone who can help. The [student safety website](#) contains additional helpful information.

**Disability Assistance:** Reasonable accommodations are provided for students who are registered with the Accessibility Services Center and make their requests sufficiently in advance. For more information, contact Disability Services (MBSC 111, Phone: 554-2872, TTY: 554-3799) or go to the website: <https://www.unomaha.edu/student-life/inclusion/disability-services/index.php>.

**Writing Assistance:** Writing is an important skill that will help you throughout the rest of your college and vocational careers. Writing is not a talent; it's a skill that can be strengthened with practice and feedback. UNO has a writing center can assist you with your papers for this and other classes, and I highly recommend you use this them. They can help you structure your papers, catch grammatical errors, and polish off even your best writing. For more information, contact the UNO Writing Center at 402-554-3311 or visit their website at <http://www.unomaha.edu/writingcenter/>.

**Life and/or Career Assistance:** The UNO Counseling Center offers a variety of counseling services to help with a range of different issues (including life stress, college stress, and other personal and academic issues). They also offer career counseling for those who may want a little extra guidance for future planning. For more information, contact the UNO Counseling Center at 402-554-2409 or visit their website at <http://www.counseling.unomaha.edu/>.

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## COURSE SCHEDULE, READINGS, & ASSIGNMENTS

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Slight adjustments may be made during the semester. Any changes will be announced on Canvas.

### WEEK 1: INTRODUCTION TO STATISTICS

Monday, August 21<sup>st</sup>:

- Please review the syllabus and course schedule.

Wednesday, August 23<sup>rd</sup>:

- Read Chapter 1 in the textbook.

### WEEK 2: VARIABLES AND LEVELS OF MEASUREMENT + ORGANIZING, DISPLAYING, AND PRESENTING DATA

Monday, August 28<sup>th</sup>:

- Read Chapter 2 in the textbook.

Wednesday, August 30<sup>th</sup>:

- Read Chapter 3 in the textbook.

**Chapter 1 & 2 Review Problems due Sunday at 11:59pm.**

### WEEK 3: MEASURES OF CENTRAL TENDENCY

Monday, September 4<sup>th</sup>:

- STUDENT HOLIDAY - NO CLASS

Wednesday, September 6<sup>th</sup>:

- Read Chapter 4 in the textbook.

**Chapter 3 & 4 Review Problems due Sunday at 11:59pm.**

### WEEK 4: MEASURES OF DISPERSION

Monday, September 11<sup>th</sup>:

- Read Chapter 5 in the textbook.

Wednesday, September 13<sup>th</sup>:

- No readings due.

**Chapter 5 Review Problems due Sunday at 11:59pm.**

### WEEK 5: PROBABILITY

Monday, September 18<sup>th</sup>:

- Read Chapter 6 in the textbook.

Wednesday, September 20<sup>th</sup>:

- No readings due today.

**Chapter 6 Review Problems due Sunday at 11:59pm.**

### WEEK 6: POPULATION, SAMPLE, AND SAMPLING DISTRIBUTIONS

Monday, September 25<sup>th</sup>:

- Read Chapter 7 in the textbook.

Wednesday, September 27<sup>th</sup>:

- No readings due.

### WEEK 7: POINT ESTIMATES AND CONFIDENCE INTERVALS

Monday, October 2<sup>nd</sup>:

- Read Chapter 8 in the textbook.

Wednesday, October 4<sup>th</sup>:

- No readings due.

**Chapter 7 & 8 Review Problems due Sunday at 11:59pm.**

## WEEK 8: EXAM 1

Monday, October 9<sup>th</sup>:

- We will use this class period as a study session for Exam 1.

Wednesday, October 11<sup>th</sup>:

- **Exam 1**

## WEEK 9: STATISTICS IN THE REAL WORLD

Monday, October 16<sup>th</sup>:

- STUDENT HOLIDAY – NO CLASS

Wednesday, October 18<sup>th</sup>:

- Class activity – no readings due.

## WEEK 10: INTRO TO HYPOTHESIS TESTING

Monday, October 23<sup>rd</sup>:

- Class activity – no readings due.

Wednesday, October 25<sup>th</sup>:

- Read Chapter 9 in the textbook.

## WEEK 11: CHI-SQUARE

Monday, October 30<sup>th</sup>:

- Read Chapter 10 in the textbook.

Wednesday, November 1<sup>st</sup>:

- No readings due.

**Chapter 9 & 10 Review Problems due Sunday at 11:59pm.**

## WEEK 12: INDEPENDENT-SAMPLES T TESTS (PART 1)

Monday, November 6<sup>th</sup>:

- Read the first part of Chapter 11 - pp. 247-260 - in the textbook. Stop at the "Dependent-Samples t Tests: Female Correctional Officers and Institutional Security" section.

Wednesday, November 8<sup>th</sup>:

- No readings due.

**Chapter 11 Part 1 Review Problems due Sunday at 11:59pm.**

## WEEK 13: INDEPENDENT-SAMPLES T TESTS (PART 2)

Monday, November 13<sup>th</sup>:

- Read the second part of Chapter 11 - pp. 261-269 - in the textbook.

Wednesday, November 15<sup>th</sup>:

- No readings due.

**Chapter 11 Part 2 Review Problems due Sunday at 11:59pm.**

## WEEK 14: ANOVA

Monday, November 20<sup>th</sup>:

- Read Chapter 12 in the textbook.

Wednesday, November 21<sup>st</sup>:

- STUDENT HOLIDAY – NO CLASS

**Chapter 12 Review Problems due Sunday at 11:59pm.**

## WEEK 15: CORRELATIONS

Monday, November 27<sup>th</sup>:

- Skim Chapters 13 in the textbook.

Wednesday, November 29<sup>th</sup>:

- No readings due.

**Chapter 13 Review Problems due Sunday at 11:59pm.**

## WEEK 16: PREP WEEK

TBD – There may be study sessions or opportunities for extra credit available this week.

## WEEK 17: FINALS WEEK

**Final Exam details will be announced closer to exam day.**