CCJS 200: Introduction to Statistics in Criminology and Criminal Justice

Professor — Dr. Greg Midgette, he/him/his
2220L LeFrak Hall
gem@umd.edu

Lecture — Tuesday & Thursday 9:30-10:45 in LeFrak 2205

Office Hours — Appointments can be booked here: calendly.com/ccjs200f22/profofficehours

Teaching Assistants

	Frank Donohue (he/him/his)	**Sarah Silberman** (she/her/hers)
Sections	204-206 (Friday)	201-203 (Thursday)
Email	fdonohue@umd.edu	ssilber2@umd.edu
Office hours	Tu 11-noon	Tu 2-3

Course Description — This is an introduction to descriptive and inferential statistics. We will use criminal justice problems and questions to understand the basics of probability, estimation, confidence intervals, and statistical validity. You will learn and apply core concepts we need to study criminal justice, crime, its determinants, and its effects on our world. This course will prepare you to build on those skills in subsequent statistics coursework.

Learning Objectives — After successfully completing this course you will be able to:

- Interpret statistical information given verbally, or by formulas, graphs, or tables, and draw inferences from them
- Recognize and use connections within statistical methods and between statistics, criminal justice, and criminology
- Use statistics to inform criminal justice decisions and solve problems

Textbook — Bachman RD, Paternoster R, Wilson TH (2022). *Statistics for Criminology and Criminal Justice (5th Edition)*. SAGE, Thousand Oaks (CA). ISBN # 9781544375687 (digital); 9781544375700 (hardcopy)

Calculator — You should bring a laptop or calculator that can take a square (x^2) and square root ($\sqrt{x}$) to lecture, discussion section, and exams. **You may not use a cell phone, tablet, laptop or anything similar for any purpose during exams.**

Software — Homework assignments will often require use of Microsoft Excel. You'll almost certainly need to learn Excel at some point in your life if you don't know it yet. Since you're enrolled in this class, now is your time. You will receive an overview of Excel functions in TA section, and key instructions for required analyses will be provided during lectures. TERPware provides Office 365 including Excel to students for no additional cost: https: terpware.umd.edu/Windows/Title/3107

ELMS-Canvas

The course syllabus, problem sets, lectures, lecture and discussion supplements, and your grades will be available on elms.umd.edu for all students that are registered for the class. Log in with your UMD Directory ID (login ID) and password. You must access ELMS often for this course.

Campus Policies

It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- Masking and safety requirements
- Academic integrity
- Student and instructor conduct
- Accessibility and accommodations
- Attendance and excused absences
- Grades and appeals
- Copyright and intellectual property

Please visit go.umd.edu/ug-policy for the Office of Undergraduate Studies' full list of campus-wide policies and follow up with me if you have questions.

Grading

Your performance will be measured by a combination of daily short quizzes, four problem sets, and three exams:

- Short quizzes will be conducted on the course's ELMS website after lecture unless otherwise noted. They will be due by 11:59 PM ET the next day (i.e., Wednesday and Friday.) These are meant to help reinforce course concepts while they're fresh in your mind. They also will help me assess whether some concepts need further attention. **These are worth *4* points in total.**
- 4 problem sets. These are open-book, open-note, and to be completed outside of class. You will have a week to complete each problem set. They are due at 9 AM on ELMS (before class) on the dates listed in the course schedule. You can work on these in groups, but you must submit your own work individually. **These are worth 10 points each, so *40* points in total.**
- 3 in-class exams. These are to be completed in class and are closed book and notes. **These are worth 12 points each, so *36* points in total.**
- A final paper, approximately 6 double-spaced pages in length. This is to be submitted by the scheduled date and time of the final exam and is closed book. **The final paper is worth *20* points.**

Note: For all problems requiring math, you must show your work to receive full credit (we will show you how to display formulas in Excel). Correct answers that don't show the steps you took to arrive at the solution will be subject to up to a 90% penalty.

Extra credit policy

I reserve the right to offer extra credit to all students at my discretion. Individual extra credit opportunities will not be offered, so don't ask. Extra credit assignments are aimed to spur deeper understanding of statistics. Specific details about these opportunities will be described in lectures or on the course website.

Final Grades

Grades will be calculated based on the table below. Final class grades will be calculated to the nearest whole number, rounding up at .5 (e.g., 86.4% will be a B and 86.5% will be a B+). Here's the breakdown:

Final Grade Cutoffs									
+	97%	+	87%	+	77%	+	67%		
A	94%	B	84%	C	74%	D	64%	F	<60%
-	90%	-	80%	-	70%	-	60%		

Late Assignments

Problem sets and quizzes must be taken as scheduled except in cases of academic accommodation in accordance with UMD policies for excused absences and ADS (see campus Attendance, Absences, or Missed Assignments policy for more information: go.umd.edu/ug-policy). Since all assignments can be completed over a period of several days, late submissions will generally not be excused and will be subject to penalty. In case of an excused absence that makes it impossible to complete an assignment, you must arrange with your teaching assistant to make up the missed assignment.

Late assignments are subject to grade penalties. Assignments received after the deadline will receive 50% of their scored grade (for example, an on-time assignment receiving an 80% will receive 40% if late). This is strictly enforced automatically by ELMS.

Disability Support

We will make every effort to accommodate students who are registered with the Accessibility and Disability Service (ADS) Office and who provide a University of Maryland ADS Accommodation form that covers the Fall 2022 semester. This form must be submitted to me no later than September 9, 2022. Students who wish to seek accommodation through the ADS Center need to provide me with the link to the testing form for each assignment, and I must receive this no later than 1 week prior to the release of each assignment. Except in rare unusual circumstances, I expect all students to complete assignments at the same time as the rest of the class.

Course Evaluation

Your feedback about this course and my teaching is very important to me. Completing a course evaluation is also part of what it means to be a member of the UMD academic community. Near the end of the semester, CourseEvalUM will be open for you to complete your course evaluation.

Discussion Sections

Graduate TAs will lead discussion sections to facilitate your understanding of the material. These will allow you to ask questions about material taught during lecture and contained in the graded assignments. You are expected to go to your registered discussion section. If the occasional need to attend a different section arises, you may attend another discussion section at the discretion of the teaching assistant leading the alternate section.

Class Conduct

Students (you) and instructors (the TAs and me) are expected to treat each other with respect. You are expected to adhere to the Code of Student Conduct. For more information, see: president.umd.edu/administration/policies/section-v-student-affairs/v-100b.

Pro Tips

There is compelling research that writing out your notes by hand leads to better retention and deeper understanding of information than typing them out. Basically, writing notes develops the part of your brain that is associated with analytical thinking better than typing does (see, e.g., www.scientificamerican.com/article/a-learning-secret-don-t-take-notes-with-a-laptop/). In this class in particular, you'll be writing out mathematical formulae, and you will be required to show the steps that yielded your answers in graded assignments. I strongly suggest that you not use laptops or tablets for your notes unless you've got a fancy writing tablet.

Statistics can be intimidating at first, but the more you practice, the more sense it will make. I've arranged the course to try to keep you on top of the material; cramming won't be a good strategy for this class. So, do not wait to seek out help if you find yourself struggling or falling behind. **Most importantly, we are here for you if you need help.**

Athletes

Official athletic schedules must be submitted to the professor or your TA. University policy states that practices do not count as an excused absence; in cases of an excused absence (i.e. a game), students are expected to arrange make-up assignments with me at least one week prior to scheduled due dates. It is the responsibility of the athlete to reconcile their athletic schedule with the course schedule and to notify me of potential conflicts so that we can make a plan. Athletes who miss assignments must submit an official athletic schedule and speak with me in advance, or else receive a grade of zero for the relevant assignment.

Inclement Weather

If there is a weather emergency, I will inform the class of special circumstances and arrangements. If your ability to meet class commitments is affected by the weather, please let your TA know as quickly as possible.

E-mail

I prefer that you email me and the TAs directly, *not through ELMS*. **You must include "CCJS200" in the subject line of all emails to me or your TA regarding this course.** It is a good habit to copy me and your TA on emails that you think either of us can answer. We will generally respond quickly to your emails, but there may be times when we are unable to do so.

Finding Help

Seek help as soon as you find yourself struggling with the material. Don't wait. I hope you will talk to me or your section TA so that we can help you find the right approach to success in this course, and I encourage you to visit tutoring.umd.edu to learn more about the wide range of campus resources available to you (math tutoring should cover anything we do in this class).

Finally, if you just need someone to talk to, visit counseling.umd.edu.

Self-identification

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to both in terms of your name and your pronouns (e.g., he/him, she/her, they/them). The pronouns someone indicates are not necessarily indicative of their gender identity. Visit lgbtq.umd.edu to learn more.

Additionally, it is your choice whether to disclose how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity (e.g., should it come up in classroom conversation about our experiences and perspectives). I will do my best to address and refer to all students accordingly, and I ask you to do the same for all your fellow Terps.

Course Schedule

Lecture	Date		Topic	Assignment	
1	Tuesday	Aug 30	Introduction: Sampling & Key Statistical Terms	Ch 1	
2	Thursday	Sep 01	Levels of Measurement and Describing Data	Ch 2, 3	
3	Tuesday	Sep 06	Measures of Central Tendency 1	Ch 4	
4	Thursday	Sep 08	Measures of Central Tendency 2	Ch 4	
5	Tuesday	Sep 13	Measures of Dispersion 1	Ch 5	*Homework 1 Due*
6	Thursday	Sep 15	Measures of Dispersion 2	Ch 5	
	Tuesday	Sep 20	FIRST EXAM	*Ch 1-5*	
7	Thursday	Sep 22	Probability Theory 1	Ch 6	
8	Tuesday	Sep 27	Probability Theory 2	Ch 6	
9	Thursday	Sep 29	Point Estimation & Confidence Intervals 1	Ch 7	
10	Tuesday	Oct 04	Point Estimation & Confidence Intervals 2	Ch 7	Homework 2 Due
11	Thursday	Oct 06	Hypothesis Testing 1: One Population Mean & Proportion	Ch 8	
12	Tuesday	Oct 11	Hypothesis Testing 2: One Population Mean & Proportion	Ch 8	
	Thursday	Oct 13	SECOND EXAM	C*h 6-8*	
13	Tuesday	Oct 18	Hypothesis Tests with Categorical Data 1	Ch 9	
14	Thursday	Oct 20	Hypothesis Tests with Categorical Data 2	Ch 9	
15	Tuesday	Oct 25	Two Population Hypothesis Tests 1	Ch 10	
16	Thursday	Oct 27	Two Population Hypothesis Tests 2	Ch 10	
17	Tuesday	Nov 01	Analysis of Variance 1	Ch 11	Homework 3 Due
18	Thursday	Nov 03	Analysis of Variance 2	Ch 11	
	Tuesday	Nov 08	Ordinary Least Squares 1: Correlation	Ch 12	
	Thursday	Nov 10	Ordinary Least Squares 2: Bivariate Regression	Ch 12	Final Paper Intro
19	Tuesday	Nov 15	THIRD EXAM	*Ch 9-12*	
	Thursday	Nov 17	NO CLASS		
20	Tuesday	Nov 22	Ordinary Least Squares 3: Binary Outcomes	Ch 12	
	Thursday	Nov 24	NO CLASS – Thanksgiving Holiday		
21	Tuesday	Nov 29	Multivariate Regression 1	Ch 13	
22	Thursday	Dec 01	Multivariate Regression 2	Ch 13	Homework 4 Due
23	Tuesday	Dec 06	Seminar on Writing About Statistical Research		
	Thursday	Dec 08	Seminar on Advanced Visualizations		
	Tentative	Dec 15	FINAL RESEARCH PAPER DUE		