

# **PAD 5351: Applied Statistics for Public Administration**

**(CRN 28520 & 27239)**

Spring 2022 Course Syllabus  
University of Texas at El Paso  
Master of Public Administration

**Synchronous Meeting Time: Monday: 17:00 to 19:50 PM**

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Office Hours: By appointment only via zoom

## **Course Description**

PAD 5351 is a course that focuses on how to conduct theoretically and methodologically sound quantitative research for students in public administration. Quantitative analysis is the main component of the course. Students will learn how to conduct statistical analyses. Descriptive statistics, hypothesis testing, sampling, and univariate/bivariate analysis are some of the topics covered in this course. Regression analysis is the focus of the course as it is one of the main statistical methods in academic and applied studies to examine the effects of independent variables on dependent variables. Ultimately, PAD 5351 is a course that gives analytical tools to be able to perform policy analysis and program evaluation in the government and nonprofit workplaces.

## **Learning Objectives**

By the end of this course, students will be able to:

- To understand and conduct statistical analyses and using statistical software.
- To use the appropriate statistical tools to conduct hypothesis testing.
- To present research findings in written and oral form.

## **Course Delivery**

The course will be delivered completely online, and we will be using the Blackboard (BB) to interact, communicate, deliver assignments, etc. Due to the current pandemic of COVID-19 we need to keep in mind that perhaps some adjustments will be made along the process. I hope this will not be the case and if changes and adjustments, if needed at all, will be minimal. The zoom tool will be used for synchronous meetings.

## **Course Expectations & Policies**

Because the course is delivered online, I advise students to follow some etiquette for purpose of communication and interaction with your peers and professor. In the following link you will find

some advice regarding this etiquette issue: <https://achievethevirtual.org/7-rules-for-online-etiquette/>  
I pasted some of the advice that I expect you to follow.

“As an online student at Achieve Virtual, communication is a bit different than in a face-to-face setting. We pride ourselves in providing several opportunities for social interactions, but the difference is that most communication is via written text in an online environment. Because this means you are missing body language cues and immediate feedback from your “listener,” it is especially important to understand some common rules for good online etiquette. This ensures that the message you intend to convey is received correctly.

1. Be respectful. While it is easier to say hurtful or disrespectful things without standing face-to-face with someone, it is important to remember that your classmates and teachers are real people who are affected by the words you say and write. It is essential to keep in mind the feelings and opinions of others, even if they differ from your own. If you wouldn't say it to someone's face, don't say it online either.

2. Be aware of strong language, all caps, and exclamation points. It is easy for written text to be misread and misunderstood. Have you ever sent a text message with good intent, but your recipient thought you were being rude? If so, then you've experienced this firsthand. By being cognizant of strong language, you can identify potential confusions before sending messages.  
Tip: Read everything out loud before you send it.

3. Be careful with humor and sarcasm. Certainly, you should not avoid being funny. We love to see your personality shine through in online classes. Many of our teachers are exceptionally funny too. But like mentioned in Rule #2, make sure that it is clear you are being funny and not being rude. Emoticons and smileys can be helpful when conveying humor or sarcasm so that it is read correctly. Just remember to keep the smiley faces away from academic papers. 😊

4. Yes, grammar and spelling matter. While texting, textspeak can be great for your friends. In an educational setting (even online) however, keep it formal. Your written communication should be professional and reflect proper writing style. Save written shortcuts and less than stellar grammar for Snapchat if you must but follow grammar rules for school.

5. Cite your sources. Whenever you are sharing an idea that originated from someone else (even if it is not word for word), it is good practice to cite that source. This applies to discussion forums too. If you read a great thought in your text, share it, but be sure you let your audience know where you saw it first.

6. Do not post or share (even privately) inappropriate material. Enough said there. Nothing is truly private online.

7. Be forgiving. Remember that not everyone will know these rules before posting. Try to be understanding of others when they struggle with written communication. It is very different than simply talking to a person face-to-face.”

## **Student Privacy**

Per regulations outlined in the Family Educational Rights and Privacy Act (FERPA), I will not discuss your grades, class performance, or any issues dealing with your personal circumstances as they relate to this course with another party that cannot legally access your collegiate records or legally obtain such information. I will not field phone calls from your parents concerning your performance or circumstances related to this course. Your performance may be discussed with other members of the faculty as it pertains to your progress in the program, consideration for awards/funding, and as it is relevant to other university and department-related considerations. 3

### **Student Disability Services**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the university regarding services for students with disabilities.

### **Academic Misconduct**

Any student found guilty of academic misconduct shall be subject to disciplinary action. Academic misconduct includes, but is not limited to, the following actions: 1. Cheating or knowingly assisting another student in committing an act of cheating or other forms of academic dishonesty. 2. Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Any ideas, words, pictures, or other source must be acknowledged in a citation that gives credit to the source. This is true no matter where the material comes from, including the internet, other student's work, unpublished materials, or oral sources. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct. It is the responsibility of the student submitting the work in question to know, understand, and comply with this policy. If no citation is given, then borrowing any of the following would be an example of plagiarism: a) An idea or opinion, even when put into one's own words (paraphrase); b) A few well-said words, if these are a unique insight; c) Many words, even if one changes most of them; d) Materials assembled by others, for instance quotes or a bibliography; e) An argument; f) A pattern of idea; g) Graphs, pictures, or other illustrations; h) Facts; i) All or part of an existing paper or other resource.

3. Unauthorized possession of examinations, reserve library materials, laboratory materials, or other course-related materials.

4. Unauthorized changing of grades on an examination, in an instructor's grade book, or on a grade report; or unauthorized access to academic computer records.

5. Nondisclosure or misrepresentation in filling out applications or other University records in, or for, academic departments or colleges.

The current Student Code of Conduct definition of plagiarism can be found at:

<https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>

## Required Texts

Meier, Kenneth J., Jeffrey L. Brudney, and John Bohte. 2015. *Applied Statistics for Public and Nonprofit Administration*. 9th ed. Thomson-Wadsworth.

## Software

We will use MS excel as the software for the course. The student needs to make sure to have the permit and privileges to be able to activate “add-ins” (File→options→add-ins) to use the “analysis ToolPak” where several statistical tools such as regression analysis are accessible.

## Data set

We will be using a variety of data sets that will be available through the course shell at Blackboard. Also, Blackboard will be the channel to stay in touch, so check it regularly.

## Course Requirements

- 1. Homework (60 points):** Homework assignments will be due often throughout the semester. Each homework assignment will be worth 10 points. There are a total of 6 assignments.
- 2. Exams (200 points):** Two non-cumulative exams will be given in the semester. Each exam is worth 100 points. You will have two hours to complete the exams. Both exams are open-book, open-note, & open-computer. The only source you may not use is another student
- 3. Participation (10 points):** Participation will be based off of attendance, arriving on time and not leaving early, and answering class questions.

## Grade Components

Homework (6 @ 10 pts.)	60
Exams (2 @ 100 pts.)	200
Participation	10
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<b>Total</b>	<b>270</b>

## Grading Scale

A = 90% - 100% (243-270)  
B = 80% - 89.99% (216-242)  
C = 70% - 79.99% (189-215)  
D = 60% - 69.99% (162-188)  
F = <60% (<162)

Students taking the course with the S/U option must earn a B to earn a Satisfactory grade.

## Syllabus Change Policy

The contents of this course syllabus are subject to change in the event of extenuating circumstances.

## Course schedule

<b>Date</b>	<b>Topic</b>	<b>Readings</b>	<b>Assignment</b>
TBD	<b>Introduction to course &amp; review</b> <b>Descriptive statistics</b> <ul style="list-style-type: none"><li>• Frequency distribution</li><li>• Measures of central tendency</li><li>• Measures of dispersion</li></ul>	MBB Ch, 4-6	
January 24	<b>Probability and hypothesis testing</b> <ul style="list-style-type: none"><li>• Normal distribution</li><li>• Z-scores</li><li>• Differences between groups</li><li>• Confidence Intervals</li></ul>	MBB Ch, 7, 11 & 12	Homework 1 Due
January 31	<b>Analysis of ordinal and nominal data</b> <ul style="list-style-type: none"><li>• Contingency tables</li><li>• Chi square test</li></ul>	MBB Ch. 14 & 15	Homework 2 due
February 7	<b>Introduction to regression analysis</b> <ul style="list-style-type: none"><li>• Correlation analysis</li><li>• Bivariate regression &amp; Curve estimation</li><li>• OLS assumptions and BLUE</li></ul>	MBB Ch. 17 & 18	Homework 3 is due
February 14	<b>Multivariate regression analysis I</b> <ul style="list-style-type: none"><li>• Assumptions</li><li>• Parameter estimation</li><li>• Model evaluation</li><li>• Interpreting outputs</li><li>• Predicting</li></ul>	MBB Ch. 20 & 21	Homework 4 is due
February 21	<b>Multivariate regression analysis II</b> <ul style="list-style-type: none"><li>• Dummy variables</li><li>• Interaction effects</li><li>• Quadratic terms</li></ul>	MBB Ch. 20 & 21	Homework 5 is due
February 28	<b>Intro to logistic regression</b> <ul style="list-style-type: none"><li>• Logit with a dummy variable as dependent</li></ul>		Homework 6 is due

	<ul style="list-style-type: none"><li>• Logit with categorical variable as dependent variable</li></ul>		
March 7	<b>FINAL EXAM</b>		