PPA207: Quantitative Methods (Section 1)

Wednesdays 6:00-8:50 p.m. Downtown Center Rm 110

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Office: Sacramento State Downtown Center Rm 230
Office hours: W 5-6 pm (in-class), W 9-10 pm (office), TH 9-10 pm (office), and by appointment
If you would like to meet me outside of office hours, please email me in advance to set up the time.

Course Description

This course aims to expand students' understanding of the statistical knowledge and technique used in public policy and administration research. This course begins with an overview of measurement, hypotheses, and descriptive statistics, introduces an elementary linear regression analysis (OLS estimation), and finishes with a discussion of regression with binary dependent variables, logistic regression. The course will involve performing applied data analysis using STATA statistical software.

Prerequisite: PPA 205 with a B- grade or better or instructor permission

Required Materials

- STATA Statistical Package: You will need a laptop during our meeting time, loaded with STATA and Excel. Please purchase your own copy of STATA for your own machine at: http://www.stata.com/order/new/edu/gradplans/student-pricing. Prices for students are $48/6 months. We will use STATA from our second meeting. If you have any question on purchasing or installing this software, please let me know in our first meeting.
- Reading materials will be uploaded via Canvas.

Learning Objectives

This course addresses five learning objectives from those set for the MPPA program. The following table shows the five objectives applicable to PPA207 and the way they are applied to this course. The attainment of these objectives will occur when students complete their in-person attendance and get real-time feedback from their peers and an instructor each week.

PPA Learning Objectives	How Applied in PPA 207
1 f. Identify, critically examine, and use relevant data to inform policy and administrative decisions.	Practice finding and identifying dataset that inform public policy or administrative issues; Learn how to use data that inform public policy and/or administrative issues

1 h. Critically review the literature to help understand and address a problem from various perspectives.	Conduct review of empirical research articles; Understand how public policy or managerial issues are developed as a research question and hypotheses.
2 a. Critically use different analytical skills, processes, and tools to address policy and administration problems.	Learn how to use STATA; Learn the statistical knowledge and analytical skills that are necessary to run a regression analysis on policy or administration problems
2 d. Effectively communicate with different audiences to understand public problems and policy and administration strategies.	Make presentation on your regression-based research and have class discussion on how to understand public policy and administrative problems
2 e. Write clearly and succinctly as appropriate to various audiences.	Practice writing a regression-based study and introduce it to a non-statistical audience.

Evaluation

Course grades will be determined in accordance with the following weights:

- Class Participation 20%
- HW Assignments 30%
- Research Project 50%
  - Topic Proposal 10%
  - Presentation 10%
  - Final Regression-Based Paper 30%

1. Class Participation

In this course, class participation means your active engagement into class/group discussion, listening to and interacting with your peers, exercising STATA, and getting real-time feedback from an instructor and your classmates. Therefore, I highly encourage you to attend the class in person. Missing more than three classes will affect your class participation.

2. HW Assignments

There are five take-home assignments throughout the semester. Among five, four assignments (5pt each) would be problem sets that entail STATA software applications and/or analyses of statistical findings. Student interaction is highly encouraged on these assignments, but each student should perform their own work when completing each assignment. One assignment (10pt) is about reviewing previous literature.

3. Research Project

Topic Proposal: Students will explore public policy, management, or administrative problems of interest and select one topic based on their interests. In their topic proposal, students should clearly define what variables they would use for their explained (dependent) and explanatory (independent) variables for their research. Detailed guidelines and a rubric will be provided by an instructor.

Individual PPT Presentation: Towards the end of the semester, students will individually present their regression-based paper during class and get feedback from each other.

Final Regression-Based Paper: The final assignment for this course is to write a regression-based research paper. Detailed instructions and a rubric for writing the paper will be provided by an instructor.

Class Attendance and Absence

I encourage students to attend all class meetings. This is an 100% in-person class, so I will not record my lecture. If you have to miss the class due to inevitable situations, please come to the class held on a different night in the same week. In this case, you don't need to ask for my permission. If this does not work for you, please check with me (1) during my office hours, (2) by making an appointment outside of office hours, or (3) by sending an email message to discuss any missed class. I am glad to assist students with any question or clarification regarding class materials and STATA-related questions. However, you are responsible for all uploaded materials, even if you are unable to attend the session on time. This means I encourage you to scan the slides for your missed class before checking with me. If possible, you may also reach out to your classmates for notes for your missed session. If you have further questions regarding class attendance, feel free to contact me.

Submission Policy

HW Assignments, topic proposal, and final regression-based paper must be completed on time. Please submit all these assignments electronically to Canvas at 6 p.m. by each deadline. Even if you are unable to attend the class, you are responsible for all specific deadlines posted on the syllabus or on Canvas. If you submit the same assignment for multiple times via Canvas before the deadline, I will grade only the latest one. Late submission is accepted but will be penalized.

Tentative Class Schedule

This schedule will serve as a general guideline for the course, not a rigid constraint through the semester. Depending on students' needs and/or an instructor's discretion, we may spend more time on a certain topic and less on another. Any changes to the syllabus or course schedule will be announced in advance.

Week (date)	Topics	Assignment due on Canvas at 6 p.m.
1 (1/25)	Orientation: Course & Syllabus Overview	No reading is required
2 (2/1)	Getting Started in Data Analysis	
3 (2/8)	Cleaning and Preparing Data	
4 (2/15)	Descriptive Statistics I	
5 (2/22)	Descriptive Statistics II	
6 (3/1)	Causal Analysis: Correlation and Causation	HW1
7 (3/8)	Regression Analysis I: Introduction	
8 (3/15)	Regression Analysis II: Interaction Effects	HW2 Topic Proposal
9 (3/22)	Spring Break—No Class	
10 (3/29)	Topic Proposal Feedback	HW3
11 (4/5)	Regression Analysis III: Multicollinearity and Heteroscedasticity	
12 (4/12)	Logistic Regression I	
13 (4/19)	Logistic Regression II	HW4
14 (4/26)	Reading, Writing, and Reviewing Empirical Research	HW5
15 (5/3)	Presentation and Discussion	
16 (5/10)	Presentation and Discussion	Final Paper due 5/17

Student with Disabilities

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADA) covers issues relating to disability and accommodations. Students with disabilities that could affect their ability to participate in the course or perform well on graded assignments should see me early in the semester. I am receptive to these situations and will try to make any reasonable accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), please contact:

Services for Students with Disabilities
Division of Student Affairs
(916)-278-6955, sswd@csus.edu.

Academic Honesty

Students should familiarize themselves with the University Honor Code and Academic Honesty Policy, particularly as it relates to plagiarism and related concerns. The Student Code of Conduct defines academic misconduct, non-academic misconduct and the consequences or penalties for each. Please check the website: https://www.csus.edu/student-affairs/student-conduct/academic-dishonesty.html. Academic dishonesty can result in a grade of F for the course.

Electronic Devices

Laptop use should pertain to class exercises and assignments only. Please refrain from the use of cell phones, laptops, or any other electronic devices to check emails, send messages, or browse non-course relevant information. I expect a high level of courtesy and professionalism in the classroom. All members of the class are expected to behave in a respectful manner towards one another.

Emails and Academic Support

I am always willing to meet students who are concerned about class assignments or STATA exercises throughout the course. If you experience some difficulties in this course for any reason, please do not hesitate to let me know. Questions about the course or other assignments can be directed to me via email. I try my best to reply to your email within 24 (weekdays) to 48 hours (weekend).