Advanced Quantitative Methods in Sociology
Sociology 695, CRN# 63189
Cramer Hall 254 on Fridays at 9-12
Spring 2022 Syllabus

INSTRUCTOR
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Virtual Office hours: Tue at 10-11am (ZOOM ID: 364 484 3601) and by appointment

COURSE DESCRIPTION
This course is designed to provide Sociology graduate students with advanced quantitative methods used in sociology and other social science disciplines. It will begin with a review of descriptive statistics and regression models, including bivariate and multiple regressions. Next, this course will cover assumptions of OLS models, considerations of mediation and moderation, and non-linear models. Then, this course will explore regression models for categorical dependent variables, such as logistic regression, multinomial logistic regression, and ordered logistic regression. Finally, it will discuss several topics for longitudinal data analysis. After this course, students are expected to understand quantitative research articles and to conduct their own research using advanced quantitative approach.

More specifically, by the end of this course, students will be able to:
- have conceptual understandings of various statistical methods that are commonly used in social sciences,
- choose appropriate statistical methods for a quantitative research project,
- analyze a quantitative data set using the statistical package, such as Stata, IBM SPSS or SAS (or package of your choice),
- interpret relevant statistical outcomes properly, and
- produce quantitative research papers.

PREREQUISITE
Successful completion of SOC 593 (or its equivalent) is a prerequisite for this course. A solid knowledge of algebra is also required to succeed in this course. Students are expected to have a basic understanding of important statistical topics, such as sampling distributions, hypothesis testing, bivariate correlation, and regression. Some prior exposure to multiple regression is also suggested.

COURSE MATERIALS
I will have readings available on Canvas. There is no required text book for you to buy for this course, but I list a few books below that you may find helpful.
- *Theory-Based Data Analysis for the Social Sciences*, Carol S. Aneshensel (2013)
- *Introduction to Mediation, Moderation, and Conditional Process Analysis*, Andrew F. Hayes (2013)
- *Statistical Methods for Categorical Data Analysis*, Daniel A. Powers and Yu Xie (2000)
- *Applied Longitudinal Data Analysis*, Judith D. Singer & John B. Willett (2003)

COURSE WEBSITE

Check Canvas (http://canvas.pdx.edu) and your email regularly for important announcements and additional readings.

REQUIREMENTS FOR THE CLASS

I expect you to *actively* participate in class prepared: Complete the required readings before the class and bring questions to the class. While in class, please be engaged in class materials. Doing so will help you not only get more out of class time but make the entire experience more enjoyable. Final grades are determined by the following requirements:

Grading Procedures

Class Participation/Discussion	10 points (10%)
Paper Proposal	10 points (10%)
Two Homework Assignments	$2 \times 10 = 20$ points (20%)
Take Home Exam	10 points (10%)
Paper Presentation	10 points (10%)
Term Paper	40 points (40%)
Total	100 points (100%)

Grading Scale

A	94 – 100%	B+	86 – 89%	C+	76 – 79%	D+	66 – 69%	F	$\leq 59\%$
A-	90 – 93%	B	82 – 85%	C	72 – 75%	D	62 – 65%	P	$\geq 70\%$
		B-	80 – 81%	C-	70 – 71%	D-	60 – 61%		

Class Participation/Discussion (10% of grade): Active involvement in the course throughout the term is critical, and I strongly encourage you to participate actively throughout the term by asking good questions, challenging what class members have said, making connections to material from other courses, relating course material to your own research topics, and developing your research project(s). We will all learn more, and have more fun, if you do.

Paper Proposal (paper and presentation, 10% of grade): The paper proposal should describe the focus of the term paper. The proposal (no more than 10 pages, with double-spacing, 12-point font, and 1-inch margins) should include a (tentative) title, the motivation of the study (1-2 paragraphs), the purpose and the specific aims of the paper (1-2 paragraphs), the literature review (3-4 pages) the research questions and hypotheses (1-2 paragraphs), and the data, methods and measures that you are going to use for the paper (2-3 pages). The paper proposal should also include references (with full citations) to relevant scholarly research. You are also required to present your proposal during Week 6 (no longer than 10 mins).

Two Homework Assignments (20% of grade): There will be two homework assignments, which are based on readings and class discussions. Although I encourage you to collaborate with other students, the work you turn in must be your own. The assignments are due on Friday during the week via Canvas.

Take Home Exam (10% of grade): The exam will be a combination of short/medium answers and calculations, based on readings, lectures, and homework assignments. You might need a scientific calculator.

Paper Presentation (10% of grade): Toward the end of the term, you will have an opportunity to present your term paper to the class. The paper presentation will give you a chance to share your research interests, to provide/receive comments, and to refine the ideas and analysis prior to submitting a final draft of your term paper. The paper presentation should be constructed using PowerPoint and no longer than 15 minutes.

Term Paper (40% of grade): Building on your proposal and analytic skills you learn from the class, an empirical research paper further develops a research question (or questions), analyzes relevant data, and provides an answer (or answers) to the question(s). The term paper should be 12-15 pages and not exceed 30 pages in length with double-spacing, 12-point font, and 1-inch margins. Please follow ASA or APA style guidelines.

COURSE POLICIES

COVID-19: It has been more than one year that we are operating in unusual circumstances, and I would like to acknowledge that the current COVID-19 pandemic has been affecting all of us in various ways, either tremendously big or relatively small. PSU is working to keep the community informed, and you are not alone. If you are experiencing any physical and/or emotional difficulties that I can help you with while taking this course, please reach out if you have questions or concerns.

Additionally, although we are meeting through Zoom and all the course activities occur online, I anticipate we may have to make additional changes as the term progresses and we learn what is working and what is not working for our course community. At this end, it is my hope that we thrive to learn as much as possible, and to create a sense of professional and supportive community throughout the term, which may last beyond the term.

General Rules for the Canvas Use:
- Avoid using all CAPS as it can give the impression that you are shouting. If you want to emphasize a point, use *asterisks* around a word or underline a word.
- Avoid personal attacks, otherwise known as "flaming." If you read a message that you suspect might be a personal attack, resist the temptation to fire off a response. Instead, let your response sit before sending or request that your instructor resolve the situation.
- If you disagree with a fellow student, describe your perspective clearly and politely rather than primarily criticizing her/his comments. Avoid any personal criticism or potentially offensive language.

Additional Rules for the Class:
- Be respectful when making a comment or responding to others' comments. This rule is the same as for face-to-face classroom behavior. However, as we are not going to have body language and tone of voice in our online communications, please use formal English appropriately.

- Be extra polite, careful, and kind about how you express yourself while posting to a discussion board, and emailing me or your colleagues.
- Avoid lengthy post, and avoid posting dozens of messages a week. In the interests of time only, which I know none of you have enough of, please work on being succinct.
- Avoid the twitter and text message abbreviations. Not everyone knows them.
- Finally, if you run into any net etiquette-related problems—if something has offended or hurt your feelings, for instance—please e-mail me directly about it. I would like to be aware of any problems.

ZOOM Meeting Etiquette: Be on time. Make your phone silent. Be ready to learn.

Policy on Academic Dishonesty: Students who violate PSU rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the university. Since such dishonesty harms the individual, all students, and the integrity of PSU, policies on scholastic dishonesty will be strictly enforced. For more information on university policies check the web page (http://www.pdx.edu/dos/psu-student-code-conduct#AcademicDishonesty).

In the context of this course, the first incident of academic dishonesty (including unauthorized collaboration on course assignments) will result in a zero for the assignment. Any additional incidents will result in an F for the course.

Academic Accommodations: If you have a physical, psychiatric/emotional, or learning disability that may impact your ability to carry out assigned course work, please contact the Disability Resource Center (DRC), 116 Smith Memorial Student Union, 503-725-4150 or drc@pdx.edu and arrange appropriate academic accommodations that you may require as a student with disability. For more information about the resources that the DRC provides, refer to the DRC web page (http://www.drc.pdx.edu/).

Title IX Reporting Obligations: Portland State is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, and gender or sex-based harassment and stalking). If you have experienced any form of gender or sex-based discrimination or harassment, know that help and support are available. PSU has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and on-housing accommodations, helping with legal protective orders, and more. Information about PSU's support services on campus, including confidential services and reporting options, can be found on PSU's Sexual Misconduct Prevention and Response website at: http://www.pdx.edu/sexual-assault/get-help or you may call a confidential IPV Advocate at 503-725-5672.

Please be aware that all PSU faculty members and instructors are required to report information of an incident that may constitute prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or student code of conduct, I have to share the information with my supervisor or the University's Title IX Coordinator or the Office of Affirmative Action. For more information about Title IX please complete the required student module Creating a Safe Campus in your Canvas.

Course Calendar (Subject to Change)

Week	Date	Section	Reading	Assignment*
1	4/1	Review of Bivariate Linear Regression	TBA	
2	4/8	OLS Multiple Regression	TBA	
3	4/15	Assumptions of OLS Models	TBA	
	4/17			Assignment 1
4	4/22	Mediation & Moderation	TBA	
5	4/29	Modeling Non-Linear Relationships	TBA	
	5/1			Paper proposal
6	5/6	Paper proposal		
	5/8			Assignment 2
7	5/13	Logistic Regression	TBA	
8	5/20	Advanced Logistic Regression Models	TBA	
	5/22			Take Home Exam
9	5/27	Longitudinal Data Analysis	TBA	
10	6/3	Paper Presentations	N/A	
	6/10 (Fri)	Term Paper Due (Canvas by midnight; no email attachment)		

* Assignments are due on Sundays during the week.