Advanced Quantitative Methods in Sociology  
Sociology 695, M 14:00-16:50, ZOOM  
Spring 2020 Syllabus

INSTRUCTOR  
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Email: hyeyoung@pdx.edu  
Office hours: By appointment only (email me to arrange a phone call or ZOOM meeting)

COURSE DESCRIPTION  
This course is designed to provide advanced quantitative methods that help graduate students in sociology understand published work using quantitative methods, develop research ideas, and conduct their own research. It will begin with a review of regression models, including bivariate and multivariate 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 other topics for longitudinal data analysis.

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 Stata, IBM SPSS or SAS (or package of your choice),
▪ interpret relevant statistical outcomes properly, and
▪ produce quantitative research papers.

PREREQUISITE  
Successful completion of SOC593 (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 D2L. While there is no required text book for you to buy for this course. However, I list a few books below that you may find helpful.

▪ *Theory-Based Data Analysis for the Social Sciences*, Carol S. Aneshensel (2013)
**COURSE WEBSITE**
Check D2L (http://d2l.pdx.edu) and your email regularly for important announcements and additional readings.

**REQUIREMENTS FOR THE CLASS**
I expect you to 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**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Proposal</td>
<td>20</td>
</tr>
<tr>
<td>Four Homework Assignments</td>
<td>$4 \times 20 = 80$</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>100</td>
</tr>
<tr>
<td>Paper Presentation</td>
<td>20</td>
</tr>
<tr>
<td>Term Paper</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>270</strong></td>
</tr>
</tbody>
</table>

**Grading Scale**

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

Class attendance is mandatory, and I strongly encourage you to participate actively throughout the course – ask questions, challenge what class members have said, make connections to material from other courses, and relate course material to your own developing research interests. We will all learn more, and have more fun, if you do.

**Paper Proposal** (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. I encourage you to discuss your topic with me before working on your paper proposal.

**Four Homework Assignments** (20% of grade): There will be four homework assignments, which are based on readings and lectures. Although I encourage you to collaborate with other students, the work you turn in must be your own. All the assignments are due on Friday during the week via D2L.
Midterm Exam (20% 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 not be 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: I want to acknowledge that we are operating in unusual circumstances this term. The current COVID-19 pandemic is affecting all of us in various ways, both big and small. PSU is working to keep the community informed, and you are not alone. Although this course has been designed as a fully online course, regardless the pandemic, 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. Please reach out if you have questions or concerns.

Net Etiquette: In all course communications, you are required to observe the rules of net etiquette. For example, your email message to me should include an appropriate subject, a proper greeting, a body text, and a signature (your name).

General Rules for the D2L 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 posts, 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](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](mailto: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/](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](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 D2L.
### Course Calendar (Subject to Change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Section</th>
<th>Reading</th>
<th>Assignment*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/30</td>
<td>Review of Bivariate Linear Regression</td>
<td></td>
<td>Homework 1</td>
</tr>
<tr>
<td>2</td>
<td>4/6</td>
<td>OLS Multiple Regression</td>
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<td>TBA</td>
</tr>
<tr>
<td>3</td>
<td>4/13</td>
<td>Assumptions of OLS Models</td>
<td>TBA</td>
<td>Homework 2</td>
</tr>
<tr>
<td>4</td>
<td>4/20</td>
<td>Mediation &amp; Moderation</td>
<td>TBA</td>
<td></td>
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<tr>
<td>5</td>
<td>4/27</td>
<td>Modeling Non-Linear Relationships</td>
<td>TBA</td>
<td>Homework 3</td>
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<td></td>
<td>Paper Proposal</td>
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<tr>
<td>6</td>
<td>5/4</td>
<td>Logistic Regression</td>
<td>TBA</td>
<td>Mid-term</td>
</tr>
<tr>
<td>7</td>
<td>5/11</td>
<td>Advanced Logistic Regression Models</td>
<td>TBA</td>
<td></td>
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<tr>
<td>8</td>
<td>5/18</td>
<td>Longitudinal Data Analysis</td>
<td>TBA</td>
<td>Homework 4</td>
</tr>
<tr>
<td>9</td>
<td>5/25</td>
<td>No class (Memorial Day)</td>
<td>N/A</td>
<td></td>
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<tr>
<td>10</td>
<td>6/1</td>
<td>Paper Presentations</td>
<td>N/A</td>
<td></td>
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<tr>
<td></td>
<td>6/8 (M)</td>
<td>Term Paper Due (D2L by midnight; no email attachment)</td>
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* All the assignments, including paper proposal, are due on Friday, 11:59pm via D2L during the week.