Advanced Quantitative Methods in Sociology
Sociology 695, CRN# 65925, M 17:30-20:20, 265 Cramer Hall
Spring 2014 Syllabus

INSTRUCTOR
Prof. Hyeyoung Woo
Office: 217P Cramer Hall
Email: hyeyoung@pdx.edu
Phone: (503) 725-8957
Office Hours: M/W 11:30-12:30 or by appointment

COURSE DESCRIPTION
This course is designed to provide advanced quantitative methods that help graduate students conduct their 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 topics for longitudinal data analysis.

By the end of this course, students will be able to:
  ▪ understand various statistical methods,
  ▪ choose appropriate statistical methods for your research,
  ▪ analyze a quantitative data set using the statistical package SPSS (or package of your choice),
  ▪ interpret relevant statistical outcomes properly, and
  ▪ write 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 basic statistical topics, such as sampling distributions, hypothesis testing, bivariate correlation and regression. Some prior exposure to multiple regression is also suggested.

COURSE MATERIALS
Regression with Graphics, Lawrence Hamilton (1992)
Discovering Statistics Using SPSS for Windows, Andy Field (2009)

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 come to class prepared: Complete the required readings before the class and bring questions to the class. Doing so will help you get more out of class time. Final grades are determined by the following requirements:
Grading Procedures

<table>
<thead>
<tr>
<th>Grading Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper Proposal</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Six Homework Assignments</td>
<td>$6 \times 10 = 60$</td>
<td>30%</td>
</tr>
<tr>
<td>In Class Exam</td>
<td>100</td>
<td>10%</td>
</tr>
<tr>
<td>Paper Presentation</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Term Paper</td>
<td>50</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>250</td>
<td>100%</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.

**Six Homework Assignments** (30% of grade): There will be six 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 of the assignments are due at the beginning of class on the day that they are due.

**In Class 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 have to bring your 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

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.

Classroom Etiquette: Be on time. Turn off cell phones. Be respectful when making a comment or responding to others’ comments.

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) 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/).
# 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>3/31</td>
<td>Review of Bivariate Linear Regression</td>
<td></td>
<td>Homework 1</td>
</tr>
<tr>
<td>2</td>
<td>4/7</td>
<td>OLS Multiple Regression</td>
<td>H (Ch.3) F (Ch.7)</td>
<td>Homework 2</td>
</tr>
<tr>
<td>3</td>
<td>4/14</td>
<td>Assumptions of OLS Models</td>
<td>H (Ch.1 &amp; 4)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4/21</td>
<td>Mediation &amp; Moderation</td>
<td>TBA</td>
<td>Homework 3 Paper Proposal</td>
</tr>
<tr>
<td>5</td>
<td>4/28</td>
<td>Modeling Non-Linear Relationships</td>
<td>H (Ch.5)</td>
<td>Homework 4</td>
</tr>
<tr>
<td>6</td>
<td>5/5</td>
<td>Logistic Regression &amp; Hazard Model</td>
<td>H (Ch.7) F (Ch.8)</td>
<td>Homework 5</td>
</tr>
<tr>
<td>7</td>
<td>5/12</td>
<td>Advanced Logistic Regression Models</td>
<td>TBA F (Ch.8)</td>
<td>Homework 6</td>
</tr>
<tr>
<td>8</td>
<td>5/19</td>
<td>Longitudinal Data Analysis</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>5/26</td>
<td>No class</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>6/2</td>
<td>Paper Presentations</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

**6/9 (M)** Term Paper Due (a hard copy to my mail box in CH 217 by 5pm; no email attachment)

* All of the assignments, including paper proposal, are due on Friday, 5pm via Dropbox during the week.