Quantitative Data Analysis  
Sociology 510/610, CRN# 13443/13457, T 14:00-16:50, 483 Cramer Hall  
Fall 2011 Syllabus

INSTRUCTOR  
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Office Hours: MW 10:00-11:00 and by appt.

COURSE DESCRIPTION  
This course is designed to provide students with opportunities to apply quantitative research methods to an empirical research project. Students are expected to have proficiency in graduate level statistics and methods and to have basic skills in at least one statistical program (e.g. SPSS, SAS, STATA, etc.). This course will cover various topics related to data analysis, including data management, non-linearity, missing values, criteria for model building and selection, and significance testing. In order to apply these concepts, the class will work together to address analytical issues students are encountering with their individual research projects. By the end of the course, students should have a solid understanding of a variety of statistical concepts and techniques related to multivariate analysis and be able to apply these methods to an empirical research project.

PREREQUISITE  
The purpose of this course is to enhance your understanding of how to do quantitative sociological research. Therefore, although there is no prerequisite, I assume that you have a basic working knowledge of statistics and the concepts from a basic research methods course, use of computers for data analysis, and at least one standard statistical software package such as SPSS, SAS or STATA.

RECOMMENDED TEXTS AND READINGS  
*The Craft of Inquiry: Theories, Methods, Evidence*, Robert Alford  
*Discovering Statistics Using SPSS for Windows*, Andy Field  
*The Little SAS Book: A Primer*, Lora Delwiche and Susan Slaughter  
*Applied Statistics and the SAS Programming Language*, Ronald Cody and Jeffrey Smith  
*The Practice of Social Research*, Earl Babbie  
*Statistical Methods for Social Science*, Alan Agresti and Barbara Finlay

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

Class Participation and Four Assignments  
4*10 = 40 points (20%)

Paper Synopsis and Outline  
15 points (15%)

Paper Presentation  
15 points (15%)

Two-Group Work  
2*10 = 20 points (10%)

Term Paper  
40 points (40%)

Total 130 points (100%)

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 Participation and Four Assignments (20% of grade): The class format will be almost entirely discussion and informal presentation. Much of the learning that will take place is through hands-on work on your own project and observing the work/problems/successes of classmates. For this reason, it is important for you to attend class, come prepared, and participate. I will assign homework most weeks that will help you become familiarized with new techniques and encourage you to apply them to data of your own interest.

Paper Synopsis and Outline (15% of grade): The paper synopsis and outline should describe the focus of the term paper. The paper synopsis and outline (no more than 5 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 (no more than 2 pages), the research questions and hypotheses (1-2 paragraphs), and the data, methods and measures that you are going to use for the paper (about 1-2 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 synopsis and outline. Please bring two copies of your work (one for me and the other is for your classmate).

Paper Presentation (15% 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 and findings, 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. Send your PowerPoint file to me and your classmate by Friday 5pm before the day that you are going to present.

Group Work (10% of grade): You will receive and provide peer feedback at two points in the class. You are expected to provide written feedback on the synopsis and outline of group members’ work. Group Work 1 (2-4 pages) is due by Friday 5pm after the day that ‘the paper synopsis and outline.’ In addition, you will serve as a discussant for several presentations given by your classmates in class.
Term Paper (40% of grade): Building on your paper synopsis and outline, the assignments, the feedbacks through the term, you will write and empirical research paper that further develops your research question (or questions), analyzes relevant data, and provides an answer (or answers) to your 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/conductcode#ProscribedPSU).

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)

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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>1</td>
<td>9/27</td>
<td>Introduction</td>
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<tr>
<td>2</td>
<td>10/4</td>
<td>Selecting and evaluating a data set</td>
<td>Assignment 1</td>
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<td>Basics of exploratory analysis</td>
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<tr>
<td>3</td>
<td>10/11</td>
<td>Framing a research question</td>
<td>Paper synopsis and outline</td>
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<td>(w/ the data set and analysis approach)</td>
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<td>4</td>
<td>10/18</td>
<td>Causal inference</td>
<td>Group work 1</td>
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<td>5</td>
<td>10/25</td>
<td>Variables and their distributions</td>
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<td>6</td>
<td>11/1</td>
<td>Sample selection, weighting and imputations</td>
<td>Assignment 2</td>
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<td>Multiple regression</td>
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<td>7</td>
<td>11/8</td>
<td>Refining the models</td>
<td>Assignment 3</td>
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<td>8</td>
<td>11/15</td>
<td>Writing up results and formatting a paper</td>
<td>Assignment 4</td>
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<td>9</td>
<td>11/22</td>
<td>Paper presentations/troubleshooting</td>
<td>Group work 2</td>
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<td>10</td>
<td>11/29</td>
<td>Paper presentations/troubleshooting (cont’d)</td>
<td>Group work 2 (cont’d)</td>
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<td>12/6</td>
<td>Term paper due (through D2L Dropbox by 5pm)</td>
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