Public Affairs 529/ Fall 2011
Advanced Analysis Workshop **Syllabus**

marieka klawitter
221 Parrington/616.1673
marieka@u.washington.edu
course web: http://courses.washington.edu/pbafadv/
drop box: https://catalyst.uw.edu/collectit/dropbox/summary/marieka/16917
office hours: Tues. and Thurs. 3:30-4:30, and by appointment

This course is designed to prepare students for more advanced work with multivariate methods especially in program evaluation and policy analysis. The course will be run as a workshop: students will read and present on statistical methods and their application to program evaluation and policy analysis. Students also choose a major course project that will result in a professional quality product.

Course Goals:

- Learn to use resources to teach yourself and peers about data and analysis
- Further skills in assessing data qualities, research design, and appropriate application of multivariate analyses.
- Gain additional exposure to the use of multivariate methods for program evaluation and policy analysis
- Learn to use your statistics foundation to understand advanced analysis methods such as limited dependent variable models (e.g., logit, probit, tobit models), multiple equation models, and multilevel methods
- Gain experience in the application of multivariate modeling and enhance skills in data manipulation.

Student assignments:

- Read complex empirical reports and understand and assess the quality of research design, data collection methods, data analysis, and conclusions.
- Lead class discussion of statistical methods, and their application in academic articles or professional reports.
- Produce and present a professional quality report using multivariate analysis

Grading:	**Due Date**	**% of Final Grade**
Reports on 2 articles	In class	5% each
Assignment 1: OLS	10/6	5%
Assignment 2: more OLS	10/18	5%
Assignment 3: logit	10/25	5%
Group presentation of article	In class	15%
Final report:		
Research proposal	11/1	10%
Interim report	11/17	15%
Final report	12/12, 10 am	20%
Class participation		15%

Assignments:

Reports on articles

You will use the Reading Research template to write a short (2 page) summary for two of the articles presented in class. The summaries can be of any of the empirical articles available prior to class time (those presented by me, other students, or guest speakers) other than one that you will present yourself. The summaries are due at the beginning of the class in which the research will be presented. The purpose of this assignment is to gain practice in focused and critical reading of research.

Data assignments

You will complete three basic assignments using the 2010 Washington State Population Survey data (or another data set of your choice). These assignments are designed to facilitate understanding of the enterprise of simulation: predicting changes in outcomes under various policy scenarios. It will also jump start you for your final project by helping to develop the basic skills required to craft and run multivariate models, use models to predict outcomes and changes in outcomes for differing sets of explanatory characteristics (especially policy variation).

Presentation of Methods and Articles

You will work in a group to summarize and present one multivariate method and one or two related articles to the class. At least one week prior to class, your group should provide a short, focused "cheat sheet" and links to your favorite web sites or other resources on the method. The group will present a discussion of why the multivariate method is used, the data requirements, and an explanation of how the method works. Then you all should present one or two interesting and policy relevant articles that employ the method. [See possible examples on the web page.] For these articles, you can use the "Reading Research" template as a guide to your presentation. My hope is that each presentation will add to our collective experience with different methods and issues in multivariate analysis, so you should focus your presentation to that end. The purpose of this assignment is to practice using your statistics foundation to understand a new multivariate method and its application.

Research Project

You will choose a major course project that will result in a professional quality written product. You can work alone or in a pair. Please consult with me prior to deciding on a topic and approach. [See examples on the web (bottom of page).]

For data you have two options: you can use the Washington State Population Survey data. This data set provides a wide variety of variables and will allow you to practice your new advanced multivariate models without worrying about identifying and understanding a new data set. Or, to work on your ability to understand and use new data, you can find a data set appropriate to a project with multivariate analysis.

All projects will include development of hypotheses and empirical strategy for testing them, manipulation of raw data, multivariate analysis of the data using the methods covered in the course, and careful communication of the results.

Project proposal: Define the project purpose and main research questions, identify the data source, and present the research design and empirical strategy. You will need a brief literature review of the relevant empirical work. [3-4 pages.]

Interim report: Present an updated project definition and report on early results (e.g., initial descriptive statistics, graphics, and models). [3-4 pages.]

Final report: This is the final product that fully presents the results of the project. You must include an executive summary (one page) and high quality graphics to summarize analysis. The report should be about 10-12 pages, but the quality and richness of the analysis and the presentation are more important than is the length of the written product.

Class participation: Students are expected to come to class prepared for active participation. Active, constructive participation includes: asking questions in order to better understand the material, contributing insights to class discussion, listening to the contributions of others, and furthering learning for other class members. Providing constructive feedback to other students on their work is important.

Texts and Materials:
The web resources for statistical methods are wonderful! But there are two books you might consider buying or borrowing. Some of you probably used Studenmund**.** Using Econometrics: A Practical Guide (6th Edition) and that is a great review for OLS, logit, and other regression topics. Also, optional but highly recommended is Cameron and Trivedi Microeconometrics Using Stata that covers both the econometrics and the software.

Schedule:

29-Sep	**Thurs**	**Introductions/ Reading Research** ▪ Reading Research Template **Remembering Regression:** ▪ "The Influence of Personal Discount Rates on Savings and Debt" ▪ Review Studenmund Ch 1,2,3 and 5 (skim)
4-Oct	**Tues**	**Nonlinear models and research design:** ▪ "The Effects of Anti-discrimination Policies for Sexual Orientation on Employment" ▪ How to read a regression ▪ Review specification and functional form: Studenmund Ch 6 and 7 and online (including excel sheet)
6-Oct	**Thurs**	**Logit model and Estimating Impacts:** ▪ Review : Logit model information and Studenmund Ch 13

		and Ch 15 ▪ "The Effects of WorkFirst Activities on Employment and Earnings and Employment" ▪ WorkFirst Sample characteristics for 2001 cohort ***Assignment 1 due***
11-Oct	**Tues**	**Multivariate Methods in Evaluation** ▪ Ravallion, Martin. (2001) "The Mystery of the Vanishing Benefits:"An Introduction to Impact Evaluation". The World Bank Economic Review 15(1) 115-140. **Choosing and Assessing Analysis methods and examples:** *Review methods for presentations*
13-Oct	**Thurs**	***Proposal Workshop: Bring 3 copies of your draft proposal.***
18-Oct	**Tues**	**Guest Speaker:** Pam McCann "Intergovernmental Policy Diffusion: National Influence on State Policy Adoptions" ***Assignment 2 due***
20-Oct	**Thurs**	**Guest Speaker:** Laura Evans "The Racial Politics of State Earmarks"
25-Oct	**Tues**	**More on Multivariate Methods in Evaluation** ▪ "Designing Impact Evaluations: Assessing Jamaica's PATH Program" Kennedy School case available at: http://www.ksgcase.harvard.edu/casetitle.asp?caseNo=1903.0# ***Assignment 3 due***
27-Oct	**Thurs**	*Student research presentation (1): Instrumental Variables*
1-Nov	**Tues**	*Student research presentation (2): Difference-in-Difference Estimates* http://pareonline.net/getvn.asp?v=8&n=24 ***Proposal due.***
3-Nov	**Thurs**	***Interim Report Workshop:*** *Bring 3 copies of your draft.*
8-Nov	**Tues**	*Student research presentation (3): Random and Fixed Effects* http://teaching.sociology.ul.ie/DCW/confront/node45.html
10-Nov	**Thurs**	*Student research presentation (4):Multinomial, Ordered, and Multivariate Logit and Probit* http://www.indiana.edu/~statmath/stat/all/cdvm/cdvm1.html#s11
15-Nov	**Tues**	*Student research presentation (5):Propensity Score Analysis* http://en.wikipedia.org/wiki/Propensity_score_matching
17-Nov	**Thurs**	*Student research presentation (6):Multilevel analysis* http://pareonline.net/getvn.asp?v=7&n=1

		Interim report due.
22-Nov	**Tues**	*Student research presentation (7):Survival or Hazard analysis* http://www.statsoft.com/textbook/survival-failure-time-analysis/
24-Nov	**Thurs**	**No class.**
29-Nov	**Tues**	*Student research presentation (8):Meta-analysis/ Meta-regression* Stanley 2001. "Wheat From Chaff: Meta-Analysis As Quantitative Literature Review" Journal of Economic Perspectives 15(3).
1-Dec	**Thurs**	Project presentations
6-Dec	**Tues**	Project presentations
8-Dec	**Thurs**	Student poster presentation session Wrap up/ evaluation
12-Dec	**Mon**	***Final Project Report due 10am***