國立政治大學社會學系博士班基本能力資格考試——「量化研究」建議表
6/1/2011

.1. 基本要求書單

指定書籍

Agresti, Alan and Barbara Finlay. 2009. *Statistical Methods for the Social Sciences*. Upper Saddle River, New Jersey: Pearson Prentice Hall.

Tarling, Roger. 2009. *Statistical Modelling for Social Researchers: Principles and Practice*. New York: Routledge.

.2. 授課大綱

Sociology 254007001
Quantitative Research Methods (量化研究)
Spring 2011

DESCRIPTION
    In the past decades, the developments of statistical methods and data collection have increased the importance of quantitative analysis in social science research. This course is designed to provide an overview on the field of quantitative research methods. It also gives students the experience of analyzing and interpreting the empirical data. The course will cover descriptive statistics, estimation and hypothesis testing, multiple regression, and categorical data analysis.

COURSE SCHEDULE

Week #	Date	Topic
Week 1	02/24	Introduction (Ch.1)
Week 2	03/03	Statistics and Social Research (Ch.2)
Week 3	03/10	Descriptive Statistics (Ch.3)
Week 4	03/17	Probability Distributions (Ch.4)
Week 5	03/24	Statistical Inference: Estimation (Ch.5)
Week 6	03/31	Statistical Inference: Significance Tests- I (Ch.6)
Week 7	04/07	Statistical Inference: Significance Tests- II (Ch.6)
Week 8	04/14	Comparison of Two Groups (Ch.7)
Week 9	04/21	(Mid-term exam)
Week 10	04/28	Analyzing Association between Categorical Variables (Ch.8)
Week 11	05/05	Linear Regression and Correlation (Ch.9)
Week 12	05/12	Multiple Regression and Correlation (Ch.10, Ch.11)
Week 13	05/19	No class
Week 14	05/26	Comparing Groups: Analysis of Variance (ANOVA) Methods (Ch.12)
Week 15	06/02	Combining Regression and ANOVA: Quantitative and Categorical Predictors (Ch.13)
Week 16	06/09	Model Building with Multiple Regression (Ch.14)
Week 17	06/16	Logistic Regression: Modeling Categorical Responses (Ch.15)
Week 18	06/23	(Final exam)

REQUIREMENTS

Each section will include lecture and discussion. You should come to class having read the materials assigned for that day. In addition, there will be a homework assignment for each section. The homework will be due no later than 5:00 PM on Wednesday. Your course grade will be based on class participation (10%), homework (30%), mid-term exam (30%), and final exam (30%).

TEXTBOOK and SUGGESTED READINGS<>:
Agresti, Alan, and Barbara Finlay. 2009. *Statistical Methods for the Social Sciences*, 4th ed.
    NJ: Pearson Prentice Hall.
<Hamilton, Lawrence C. 2006. *Statistics with Stata: Updated for Version 10.* Pacific Grove,
    CA: Duxbury Press.>

Suggested Readings for Advanced Quantitative Methods

.1. Linear Regression
Hair, J.F., Jr., R.E. Anderson, R.L.Tatham, and W.C. Black. 2006. *Multivariate Data Analysis*. 6th ed. New Jersey: Pearson Prentice Hall.
Kutner, Michael H., Christopher J. Nachtsheim, John Neter, and William Li. 2005. Applied Linear Statistical Models. New York: The McGraw-Hill Companies, Inc.

.2. Logistic/Probit Regression Methods
Agresti, Alan. 2007. *An Introduction to Categorical Data Analysis*, 2nd edition. New York: Wiley.
Kleinbaum, David G. and Mitchel Klein 2002 Logistic Regression: A Self-Learning Text. Springer Science Business Media, Inc.
Powers, Daniel A. and Yu Xie. 2000. Statistical Methods for Categorical Data Analysis. San Diego: Academic Press.

.3. Structural Equation Models (SEM)
Bollen, Kenneth A. 1989. *Structural Equations with Latent Variables*. New York: John Wiley & Sons.
Hayduk, Leslie A. 1987. *Structural Equation Modeling with LISREL*. The John Hopkins University Press.
Joreskog, K.G. and D. Sorbom. 1993. *LIEREL 8: Structural Equation Modeling with the SIMPLIS*. NJ: Lawrence Erlbaum Association Publishers.
Kim, Jae-on and C.W. Mueller. 1978. *Introduction to Factor Analysis: What It Is and How to Do It*. Beverly Hills. CA: Sage (Series No. 13).
Long, J.S. 1983. *Confirmatory Factor Analysis*. Beverly Hills. CA: Sage (Series No. 33).
Long, J.S.1983. Covariance Structure Models: An Introduction to LISREL. Beverly Hills. CA: Sage (Series No. 34).

.4. Multilevel Models
Raudenbush, Stephen W. and Anthony S. Bryk, 2002, Hierarchical Linear Models: Applications and Data Analysis Methods. Thousand Oaks, CA: Sage.
Raudenbush, Stephen W., Anthony S. Bryk, Yuk Fai Cheong, and Richard T. Congdon, Jr., and Mathilda du Toit. 2004. HLM6: Hierarchical Linear and Nonlinear Modeling. IL: Scientific Software International.
Yang, Yang. 2008. "Social Inequalities in Happiness in the United States, 1972 to 2004: An Age-Period-Cohort Analysis." American Sociological Review 73:204-226.

.5. Longitudinal data Analysis
Allison, Paul D. 1984. *Event History Analysis: Regression for Longitudinal Event data*. Sage Series No.46.
Box-Steffensmerier, Janet M. and Bradford S. Jones. 2007. *Event History Modeling: A Guide for Social Scientists*. New York: Cambridge University Press.
Singer, Judith D. and John B. Willett. 2003. *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford University Press.
Yamaguchi, Kazuo.1991. *Event History Analysis*. Newbury Park: SAGE Publications.

.6. Other Topics
Morgan, Stephen L. and Christopher Winship. 2007. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Cambridge: Cambridge University Press.