Academic Year 2006/2007
Spring Semester 2007

Hertie School of Governance

Course Title: U2: Applied Quantitative and Qualitative Methods

Professor Steven Finkel

Syllabus

1. General Information

Class	Lecture Monday 1100-1300, Wednesday 1400-1600
Venue	Room #21.1 Learning Center
Convener	Steven Finkel
Office	Room 2.09
Telephone	2-308
E-Mail	finkel@hertie-school.org
Office Hours	M 1400-1500 W 1200-1300 and appointments
Teaching Assistant	Connie Kunz, Christian Reisinger
Room and Telephone	Room 2.33, Phone 2-115 and 2-133
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Office Hours	Kunz: M 10-11 Reisinger F 9-10 and appointments

2. Aim and structure of the course

Haas and Springer, authors of one of the textbooks in the class, state that "One of the dark and dirty secrets of public administration may be that nearly every kind of public employee engages in policy research at one time or another." This may be only a slight exaggeration, but it is undeniable that policy makers are increasingly required to process, evaluate, and critique the findings from quantitative and qualitative research in order to make informed policy decisions. This course introduces students to the basics of research design, and to the quantitative and qualitative methods that can be used in addressing policy-relevant research questions. The goals of the course are 1) for the student to become both an intelligent consumer of quantitative and qualitative research, with the ability to see the strengths and the flaws in existing research studies, and 2) to give students the skills necessary to begin conducting original policy research studies of their own. By the end of the class, students will have developed critical understanding of issues related to measurement, causal inference, experimental and quasi-experimental research, sampling and survey research, focus groups, in-depth interviewing and other qualitative methods of data collection, as well as fundamental concepts in descriptive and inferential statistical reasoning, and data analytic techniques such as crosstabulation, analysis of variance, and correlation and regression analysis. Students will also develop expertise in using canned statistical packages (in our case, STATA) in conducting quantitative research.

No prior knowledge of statistics, research methods or STATA is assumed, required or necessary to profit from the course. We will go through each area step by step, first theoretically in the main lecture part of the course, and then, when appropriate, 'hands on' with STATA in the class lab sessions. In keeping with the Hertie School's pedadogical approach, we will also use cases to illustrate different aspects of policy research design and analysis. Some of these cases will be found in the Haas and Springer book, some will be examples of policy analysis and evaluation in the field of democracy promotion and international development conducted by your professor and others, and some can be found on web sites devoted to case studies in statistical analysis.

3. Teaching, Requirements & Grading

Grades will be based on two in-class examinations, three homework exercises, and your contributions to discussions in the lectures and especially in the lab sessions. The first exam, worth 25% of the final grade, will take place during the lab sessions of 14 March. The final exam will be on 9 May, and will be worth 30% of the final grade. The homework exercises (due 7 March, 4 April, and 2 May) will be problem sets or computer applications with STATA of material we cover in class, and will each be worth 10% of the final grade. Your participation and performance in the lab sessions will be worth 15% of the final grade.

Homework Exercise 1 (due 7 March)	10%
Mid-Term Exam (14 March)	25%
Homework Exercise 2 (due 4 April)	10%
Homework Exercise 3 (due May 15)	10%
Final Exam (9 May)	30%
Lab Session Participation	15%

Attendance at both lecture and lab sessions is mandatory. If it is unavoidable for you to miss a session, please clear this with me or your Teaching Assistant beforehand.

Some advice: Your success in this course will depend to a large extent on your keeping up with the material as it is presented. I strongly urge you not to fall behind because the material in the course is intensely cumulative. You will also benefit much more from the lectures if you read the assigned material before the class sessions.

4. General recommended readings:

- Peter J. Haas and J. Fred Springer, *Applied Policy Research: Concepts and Cases*. Garland Publishing, Inc., 1998.
- Kenneth J. Meier, Jeffrey L. Brudney, and John Bohte, *Applied Statistics for Public and Nonprofit Administration*. 6th Edition. Thomson Wadsworth Publishing, 2006.
- Lawrence C. Hamilton, *Statistics with STATA.* Brooks-Cole Publishing, 2006.
- Finkel, Steven E., *The Impact of the Kenyan National Civic Education (NCEP) Programme on Democratic Attitudes, Values and Behavior*, Prepared for U.S. Agency for International Development, Nairobi, Kenya, December 2003. (PDF file posted on Blackboard).

5. Overview of the course

A. Class Lecture

Sess.	Date	Topic
		Part I. The Policy Research Process
#1	30/31.01.2007	Introduction to the Course Introduction to Social Science and Policy Research
#2	05/07.02.2007	Research Strategies I: Experimental Designs Research Strategies II: Quasi-Experimental Designs
#3	12/14.02.2007	Quasi-Experimental Designs (continued) Research Strategies III: Surveys and Passive Observational Designs
#4	23.02.2007	(NOTE SPECIAL DAY: PLENARY SESSION, AUDITORIUM 1, 1400-1600) Surveys and Passive Observational Designs (continued)
#5	25/28.03.2007	Research Strategies IV: Qualitative Methods
		Part II: Statistical Reasoning and the Analysis of Quantitative Data
#6	05/07.03.2007	Measures of Central Tendency and Dispersion
#7	14.03.2007	**MID-TERM EXAM**
#8	19/21.03.2007	The Normal Distribution and Statistical Inference
#9	26/28.03.2007	Hypothesis Testing and T-Tests
#10	02/04.04.2007	Crosstabulation
#11	16/18.04.2007	Introduction to Correlation and Regression Analysis
#12	23/25.04.2007	Assumptions and Inference in Regression
#13	30.04/2.05.2007	Multivariate Analysis
	09.05.2007	**FINAL EXAM**

B. Lab Session

Sess.	Date	Topic
#1	31.01.2007	Lab: Introduction to STATA
#2	07.02.2007	Lab: Discussion of Readings
#3	14.02.2007	Lab: Data Manipulation and Graphic Display
#4	21.02.2007	Lab: Discussion of Readings
#5	28.02.2007	Lab: Univariate Distributions
#6	07.03.2007	Lab: Discussion of Readings and Review for Mid-Term
#7	14.03.2007	MID-TERM EXAM: NO CLASS
#8	21.03.2007	Lab: Inferential Statistics
#9	28.03.2007	Lab: T-Tests
#10	04.04.2007	Lab: Crosstabulation
#11	18.04.2007	Lab: Correlation and Regression
#12	25.04.2007	Lab: Regression
#13	02.05.2007	Lab: Multivariate Analysis and Review for Final Exam Hamilton, pp. 164-165, 176-183.

6. Detailed Schedule

A. Class Lecture

Session #1	**30/31.01.2007**	**Introduction to the Course and Introduction to the Research Process**
Concepts	Social Science and Policy Research; Theories; Variables; Hypotheses; Unit of Analysis; Levels of Measurement; Validity; Reliability; Measuring Policy Outcomes	
Readings *Cases*	• Meier, Brudney and Bohte, Chapters 1-2. Finkel, Steven E., Anibal Perez-Linan, and Mitchell A.Seligson, "The Democracy Promotion Project," Pp. 6-12 and 43-48 (on Blackboard web site)	

Session #2	**05/07.02.2007**	**Research Strategies I: Experimental Designs** **Research Strategies II: Quasi-Experimental Designs**
Concepts	Causal Inference; Experimental Control; Random and Non-Random Assignment; Cross-Sectional and Longitudinal Studies; Statistical Matching	
Readings	• Meier, Brudney and Bohte, Chapter 3. • Haas and Springer, Chapters 1-3. • Moses, Lincoln E., and Frederick Mosteller, "Experimentation: Just Do It!" Chapter 12 in Spencer, Bruce, editor, *Statistics and Public Policy*. Oxford, UK: Oxford University Press, 1997.	
Cases	"Evaluation of the California Ignition Interlock Pilot Program: A Policy Experiment, Chapter 6 in Haas and Springer.	
	"The Dropout Prevention Mentor Project: Delivering Unexpected Messages Through Policy Research," Chapter 11 in Haas and Springer..	

Session #3	**12/14.02.2007**	**Quasi-Experiments (Continued)** **Research Strategies III: Survey Research and Passive Observational Designs**
Concepts	Sampling Strategies; Representative and Non-Representative Samples, Sampling Error; Questionnaire Construction and Item Bias; Uses of Surveys in Policy Research; Passive Observation and Use of Existing Data	
Readings	• Babbie, Earl., "The Logic of Sampling," and "Survey Research," Chapters 7 and 9 in *The Practice of Social Research*. Belmont, Ca.: Thomson Wadsworth, Inc.	
Cases	Finkel, Steven E., *The Impact of the Kenyan National Civic Education (NCEP) Programme on Democratic Attitudes, Values and Behavior*, Chapters 1-2.	

Session #4	23.02.2007 Research Strategies II: Survey Research and Passive Observational Designs (Continued)
Cases	No new cases
Readings	No new readings

Session #5	26/28.02.2007 Research Strategies I: Qualitative Methods
Concepts	Focus Groups; In-Depth Interviewing; Ethnographic Studies; Causal Inference in Qualitative Designs; Integrating Qualitative and Quantitative Methods
Readings	• Davies, Phil, "Qualitative Research and Evaluation: How Do You Know Why (and How) Something Works?" Chapter 8 of *The Magenta Book: Guidance Notes for Policy Evaluation and Analysis*. London: Government Chief Social Researcher's Office (UK), 2004. • Bamberger, Michael, "Opportunities and Challenges for Integrating Quantitative and Qualitative Research," Chapter 1 in Bamberger, Michael, editor, *Integrating Quantitative and Qualitative Research in Development Projects*. Washington, D.C.: The World Bank, 2000. • Haas and Springer, Chapter 13, "Lessons From Case Studies in Policy Research
Cases	"Studying Interhousehold Transfers and Survival Strategies of the Poor in Cartagena, Colombia," Chapter 5 in Bamberger, Michael, editor, Integrating Quantitative and Qualitative Research in Development Projects. Washington, D.C.: The World Bank, 2000.
	Finkel, Steven E., *The Impact of the Kenya National Civic Education Programme on Democratic Attitudes, Values and Behavior*, chapter 7. "Housing Sales in Urban Neighborhoods: Using Policy Research to Inform Planning," Chapter 12 in Haas and Springer.

Session #6	05/07.03.2007 Measures of Central Tendency and Dispersion
Concepts	Mean, Median, Model; Variance and Standard Deviation; Qualitative Variation; Statistical Distributions
Readings	• Meier, Brudney and Bohte, Chapter 4-6.
Cases	Finkel, Steven E. *The Impact of the Kenya National Civic Education Programme*, Chapter 6.

Session #7	14.03.2007 MID-TERM EXAMINATION

Session #8	19/21.03.2007 The Normal Distribution and Introduction to Statistical Inference
Concepts	Parameters Versus Statistics; Normal Distribution; Central Limit Theorem; Sampling Distributions; Standard Error; Confidence Intervals for Means and Proportions
Readings	• Meier, Brudney and Bohte, Chapter 8, Chapter 9 (pp. 153, 159-160), chapter 11
Cases	"Radon Found in Public Schools: How Many Public Schools Have Excessively High Concentration of Radon?" http://www.csustan.edu/ppa/llg/statdata/cap.htm#Radon

Session #9	**26/28.03.2007 Hypothesis Testing and T-Tests**
Concepts	Null and Research Hypotheses; Type 1 and Type II Errors; Test Statistics; Critical Values; Rejecting Versus Accepting Hypotheses; Z versus T Distributions; One Sample Versus Two Sample Tests; Statistical versus Substantive Significance
Readings	• Meier, Brudney and Bohte, Chapters 12, chapter 13 (pp. 209-212, 213-214 (top), chapter 14 (pp. 217-227)
Cases	Pradhan, Menno and Laura B. Rawlings, "The Impact and Targeting of Social Infrastructure Investments: Lessons from the Nicaraguan Social Fund," *The World Bank Economic Review* 16, 2: 275-295, 2002.
	San Francisco Parking Meters When did theft from parking meter collections begin? http://www.csustan.edu/ppa/llg/statdata/capparkingmeters.htm

Session #10	**02/04.04.2007 Crosstabulation**
Concepts	Row, Column and Total Percentages; Chi-Square Test for Independence; Measures of Association; Proportional Reduction of Error (PRE) Measures
Readings	• Meier, Brudney and Bohte (MBB), Chapters 15-16.
Cases	"Electronically Monitored Home Detention" http://www.csustan.edu/ppa/llg/statdata/capemhd.htm

Session #11	**16/18.04.2007 Introduction to Correlation and Regression Analysis**
Concepts	Covariation; Correlation; Intercept, Slope; Least Squares; Explained Variation; R-Squared; Standard Error of Estimate
Readings	• Meier, Brudney and Bohte (MBB), Chapter 18.
Cases	Finkel, *The Impact of the National Kenyan Civic Education Programme*, Chapters 3.

Session #12	**23/25.04.2007 Assumptions and Inference in Regression Analysis**
Concepts	Least Squares Assumptions; Residual Analysis; Standard Errors and T-Tests for Regression Coefficients; Significance of Overall Equation
Readings	• Meier, Brudney and Bohte (MBB), Chapters 19, 23 (until p.443)
	Finkel, *The Impact of the National Kenyan Civic Education Programme on Democratic Attitudes, Values, and Behavior*, Chapter 4.

Session #13	**30.04/02.05.2007 Multivariate Analysis**
Concepts	Spurious, Intervening and Conditional Relationships, Partial Regression Coefficients; Relative Importance of Variables; Dummy Variable Regression
Readings	• Meier, Brudney and Bohte (MBB), Chapters 17,21.
Cases	Finkel, *The Impact of the National Kenyan Civic Education Programme on Democratic Attitudes, Values and Behavior*, Chapters 5, 8.

	09.05.2007 FINAL EXAMINATION

B. Lab Sessions

As noted above, Lab sessions will be devoted partially to discussion of the weekly readings and cases, and partially to computing exercises with STATA. Additional reading, exams and assignments NOT listed in the Outline for Class Lecture Sessions follows here:

Sess.	Date	Topic
#1	31.01.2007	Lab: Introduction to STATA Hamilton, *Statistics with Stata*, Chapters 1-2
#2	07.02.2007	Lab: Discussion of Readings
#3	14.02.2007	Lab: Data Manipulation and Graphic Display Hamilton, *Statistics with Stata*, Chapter 3
#4	21.02.2007	Lab: Discussion of Readings
#5	28.02.2007	Lab: Graphical Display and Univariate Distributions Hamilton, pp. 120-124 **HOMEWORK 1 HANDOUT OUT**
#6	07.03.2007	Lab: Discussion of Readings and Review for Mid-Term **HOMEWORK 1 DUE**
#7	14.03.2007	**MID-TERM EXAMINATION**
#8	21.03.2007	Lab: Inferential Statistics
#9	28.03.2007	Lab: T-Tests Hamilton, pp. 143-148 **HOMEWORK 2 HANDOUT OUT**
#10	04.04.2007	Lab: Crosstabulation Hamilton, pp. 130-133 (top) **HOMEWORK 2 DUE**
#11	18.04.2007	Lab: Correlation and Regression Hamilton, pp. 159-163, 168-175
#12	25.04.2007	Lab: Regression Hamilton, pp. 165-167, 175-176 **HOMEWORK 3 HANDOUT OUT**
#13	02.05.2007	Lab: Multivariate Analysis and Review for Final Exam Hamilton, pp. 133-134, 164-165, 176-183. **HOMEWORK 3 DUE**