Quantitative Methods for Policy Research and Evaluation  
PUBL 6316 & POLS 6383  
M 5.30pm – 8.30pm  
AH 322

Dr. Jeronimo Cortina  
424 PGH  
jcortina@central.uh.edu  
Office Hours: M 3:00pm- 5:00pm or by appointment

I. Course Description

What is the difference between “good” and “bad” policies? How can we distinguish between them? Why is this important? The purpose of this course is to provide students with some basic (and not so basic) scientific tools to develop a set of skills in order to conduct and evaluate public policies.

Ultimately, the goal of this course is twofold. First, to provide students a practical statistical tool to perform some more advanced statistical methods useful in answering policy questions when using observational or experimental data. Second, this course will allow students to critically review published research, whether for policy or academic purposes that claim to answer causal questions. The main focus of this course is to focus on the challenge of answering causal questions, that is, those that take the form “Did X cause Y?” using data that do not necessarily conform to a well implemented randomized study. The course will be based on examples from real public policy issues in order to illustrate key ideas and methods. First, we will explore how best to design a study to answer causal questions given the logistical, budgetary and ethical constraints inherit in policy evaluation. We then discuss several approaches to drawing causal inferences from observational studies including propensity score matching, instrumental variables, differences in differences, fixed effects models and regression discontinuity designs.

In order to make the class interesting and dynamic all students are expected to be ACTIVE participants and are to be PREPARED to critically ENGAGE and DISCUSS assigned readings as scheduled.

II. Grading Procedures:

There will be 7-8 homeworks, which will total 70% of the final grade and one final project or final exam (30%) that will involve both data analysis and a thoughtful description of both the analysis and the findings. One homework will involve a class presentation. Depending on the size of the class, some assignments may be done in groups.
Final letter grades will be calculated using the following percentages:

- 95-100% = A
- 90-94 = A-
- 87-89 = B+
- 84-86 = B
- 80-83 = B-
- 77-79 = C+
- 74-76 = C
- 70-73 = C-
- 67-69 = D+
- 64-66 = D
- 60-63 = D-
- 59 or less = F

III. Course Outline

The following outline describes the topics that will be covered and its readings. Those readings marked with an * are recommended, and thus not required. Some of the reading assignments might change in case that there is a more appropriate reading (there will be a class announcement to indicate if a reading has been change with enough time in advance). Readings are available in Jstor or their respective Journal (through MD Anderson Library) or will be at Blackboard.

Session 1: Review Session and Introduction to Causal Inference


Session 2: Randomized Experiments and the Rubin Causal Model


Session 3: Observational Studies


Winship, Christopher and Michael Sobel (2004) “Causal Inference in Sociological Studies” in Handbook of Data Analysis edited by Melissa Hardy and Alan Bryman, London: Sage Publications, 481-504 – the version you’ll see is number 1-63 and you’ll be responsible for 36-38 for this week


Session 4: Propensity Score - Theory

Rosenbaum, PR and D B. Rubin (1985) "Constructing a control group using multivariate matched sampling methods that incorporate the propensity score", The American Statistician, 39: 33-38


Session 5: Propensity Score– Practice


*Foster, M. “Propensity Score Matching: An Illustrative Analysis of Dose Response” forthcoming in Medical Care

Session 6: Propensity Score Wrap-Up


Session 7: Instrumental Variables Models – Introduction and Theory


Session 8: Instrumental Variables Models – Practice (Stata)


*E Michael Foster. (2000) “Is more better than less? An analysis of children’s mental health services” Health Services Research. Chicago: Vol. 35, Iss. 5; p. 1135


Session 9: Difference in Differences


ONLY PP 19-23

Bogart & Cromwell. “How much is a neighborhood worth?” *J. Urban Economics* 47


Session 10: Fixed Effects


Session 11: Regression Discontinuity


Session 12: Structural Equations Modeling (SEM), Path Analysis


Session 13: Wrap-Up

Additional reading that could be helpful at some point:


IV. Academic Integrity

Cheating and plagiarism will not be tolerated and will result in a grade penalty or failure of the course. Each student in this course is expected to abide by the University of Houston’s policies against cheating and plagiarism. The University’s statement on academic honesty is available from the student handbook, which can be found at http://www.uh.edu/dos/pdf/2009-2010StudentHandbook.pdf

You are encouraged to work, study together and to discuss information and concepts covered in lectures and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, a diskette, or a hard copy.

Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment (this applies to homework, exams, quizzes, etc.). Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.

During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.
V. Accommodations for students with disabilities

The University of Houston is committed to providing reasonable accommodations for eligible students with disabilities, including students who have learning disabilities, health impairments, psychiatric disabilities, and/or other disabilities. If you believe you have a disability which requires accommodation, please contact the Center for Students with Disabilities (CSD) at 713-743-5400 voice or 713-749-1527 (TTY)

VI. Cell Phones, Beepers & Laptops

Since they cause interruptions and distractions, cell phones and beepers should be turned off during class time. Please do not use any Instant Messaging software if you bring your laptop to take notes. In particular, no cell phones, beepers and laptops may be accessible during exams.