Consumer Science 999

Causal Models for Household Economic Wellbeing

Spring 2012
Wed 10:00 - 11:30 AM
Room: 7401 Social Science

Course Syllabus

Instructor: J. Michael Collins, jmcollins@wisc.edu

Resources: Learn at UW learn@uw.wisc.edu will be the main resource for this course.

Prerequisites: Graduate student status.

Text:

Course Overview:
This course is designed for PhD students to provide an applied research opportunity to learn causal models from econometrics and program evaluation. Topics include panel models, instrumental variables (IV), reduced form, fixed effects, propensity scores and hierarchical linear modeling (HLM). The course
will include weekly programming assignments using STATA. Course readings and problem sets will focus on household economic wellbeing and other dimensions of household wellbeing (i.e. physical health, mental health, and stress). Each session will begin with an overview of the topic provided by the instructor, followed by a discussion of the assigned readings and review of STATA programming files for that week.

**Assignments:** Assignments will primarily be each week’s programming do files in Stata and that will serve as a problem set with 8 in total. The final paper will be an applied analysis exercise. The final paper is worth 60 percent of the course grade and the 8 problem sets each 5 percent. The final paper will be divided between a 20 point literature review and methods draft due in week 10 and a 40 point final paper. Comments will be provided on the preliminary draft to incorporate in the final draft.

**Grading Policy:** In this class we will adhere to University grading standards and policies of academic misconduct. See [students.wisc.edu](http://students.wisc.edu). Students must be cautious to avoid plagiarism defined in the UW bylaws as ‘using another person’s ideas, words, or research and presenting it as one’s own by not properly crediting the originator.’ For more information on what is considered plagiarism and how to avoid it, see The Writing Center’s handout at [students.wisc.edu](http://students.wisc.edu).

**Accommodations:** Your success in this class is important. If there are circumstances that may affect your performance in this class, we can work together to develop strategies for adapting assignments to meet both your needs and the requirements of the course. The McBurney Disability Resource Center provides resources for students with disabilities. You will need to provide documentation of disability to them in order to receive official university services and accommodations. 263-2741 and location of McBurney Center, 702 W. Johnson, Suite 2104, [www.mcburney.wisc.edu](http://www.mcburney.wisc.edu).

**Course Outline:**

Week 1 Course Introduction


- **Assignment Due**: Select data set and basic topic/question of interest.

**Week 2 Background on Stata**

- Cameron and Trivedi’s *Microeconometrics Using Stata* Review Chapter 1 and Chapter 2 (section 2.3 and 2.4 only)

- Hansen’s *Econometrics* Chapter 1 and Appendix A

- **Assignment Due**: Obtain data and read into Stata. Create a do.file.

- **Assignment Due**: Review linear and matrix algebra exercises in *Textbook Name* Chapter 1 p. 1-45.

**Week 3 Panels**

- Allison’s *Fixed Effects Regression Models*

- Angrist and Pischke’s *Mostly Harmless Econometrics* Chapter 5


- **Assignment Due**: Create descriptive tables using esttab and/or tabout.

- **Assignment Due**: Review linear and matrix algebra exercises in *Textbook Name* Chapter p. 46-95.

**Week 4 Fixed Effects and Random Effects**

- Allison *Fixed Effects Regression Models*


- Stata instructional video: [http://www.youtube.com/watch?v=MMijkK4t9UE](http://www.youtube.com/watch?v=MMijkK4t9UE)

- **Assignment Due**: Fixed effect models in Stata using NLSY79

Week 5 Instrumental Variables

- Angrist and Pischke’s *Mostly Harmless Econometrics* Chapter 1, 2, and 4 (p. 113-149).

- Gale Paper in American Economic Journal

- **Assignment Due**: Prepare for IV by recoding variables and using the reshape command.

Week 6 Instrumental Variables

- Angrist and Pischke’s *Mostly Harmless Econometrics* Chapter 4 (p. 150-218)


- **Assignment Due**: IV model in Stata using NLSY79 and state law variables - ivreg2 and ivregress
Week 7 Regression Discontinuity

- Angrist and Pischke’s *Mostly Harmless Econometrics* Chapter 6


Week 8 Propensity Scores


Week 9 Propensity Scores


Week 11 Multilevel Models (Overview)


• **Assignment Due:** Complete all exercises within the NIH e-chapter.

Week 12 Multilevel Models

• Rabe-Hesketh and Skrondal’s *Multilevel and Longitudinal Modeling Using Stata*, Chapter 2, pp. 51-85.


Week 13 Multilevel Models (Context Effects and Longitudinal)


Week 14 Standard Errors and Non-OLS Models


Week 15 Course Wrap-Up

• **Assignment Due:** FINAL PAPER

*Note: all readings subject to change. Suggestions for required or recommended readings are encouraged.*