

DEPARTMENT OF ECONOMICS
UNIVERSITY OF MISSOURI

Economics 9447
Advanced Empirical Methods
Topics in Microeconomic Policy Analysis

Spring 2019

Class Meetings: Tuesday, Thursday 9:30-10:45 a.m., Lafferre W0015

Instructor: Peter Mueser, mueserp@missouri.edu, 331 Professional Bldg, 882-6427

Office Hours: Wednesday 3:30-5 p.m., Friday 1:30-3 p.m. or by appointment (an appointment is always recommended).

Prerequisites: Economics 8451, 8473 (concurrent enrollment acceptable), or equivalent. Economics 9473 is recommended. (Economics 9446 is *not* a prerequisite.)

Course Description: The objective of Economics 9446 and 9447 is to provide a toolkit for the evaluation of key economic policy questions in the areas of labor, public economics, social welfare and health. The courses will cover the most current and relevant empirical techniques in these fields, and provide context and examples of applications. Although the focus of the courses is in the areas described above, the toolkit will be useful for research in all areas of applied microeconomics and policy analysis. Economics 9446 and 9447 may be taken in any order.

Grading:	Attendance and Class Participation	15 percent
	Assignments	20 percent
	Midterm Exam	15 percent
	Final Exam	25 percent
	Final Paper & Presentation	25 percent

Grading scale: A 90-100; B 80-89.9; C 70-79.9; Failing below 70.

Although there is no explicit penalty for absences, multiple absences will influence the attendance and class participation grade.

Exams: There will be one midterm exam and a final exam. The midterm exam will be given in week 8 of the semester. The final exam will be given during exam week at the time specified on the MU schedule.

Assignments: There will be 4-7 problem set assignments given during the semester to aid in studying for the exams. Although late problem sets are accepted, a penalty will always apply. Generally, a late problem set will not be accepted after the assignment has been

returned or reviewed in class.

Paper and presentation: A term paper, and a presentation covering this material, is required. For students who have taken Economics 9446, the paper may be an extension of the paper in that course. For economics students, this paper can be designed to serve as your required field paper. The presentations will be scheduled for weeks 13-14 of the semester.

Texts:

Required: Angrist, Joshua D., and Jörn-Steffen Pischke (2009), *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton, NJ: Princeton University Press.

Recommended: Wooldridge, Jeffrey (2010) *Econometric Analysis of Cross Section and Panel Data*. Cambridge, Mass.: MIT Press.

The two text are available under Ellis Library Reserve for this course. Copies of other assigned readings can be found on the course Canvas website.

Topics and Reading List

Note: Reading assignments will be listed on Canvas. Although most assignments will draw from the listing below, other readings may be assigned as well.

Comparing Experimental and Non-Experimental Designs (Week 1)

Angrist and Pischke, chapters 1-2.

LaLonde, Robert J. (1986), "Evaluating the Econometric Evaluations of Training Programs with Experimental Data," *American Economic Review*, 76(4): 604-20.

Heckman, James J. and Jeffrey A. Smith (1995), "Assessing the Case for Social Experiments," *Journal of Economic Perspectives*, 9(2): 85-110.

Regression Review (Weeks 1-2)

Angrist and Pischke, chapter 3, page 27-68.

Correlated Errors (Weeks 2-3)

Angrist and Pischke, chapter 8.

Moulton, B.R (1990), "An Illustration of a Pitfall in Estimating the Effects of Aggregate Variables on Micro Units," *Review of Economics and Statistics*, 72 (May): 334-338.

Bertrand, M., E. Duflo, and S. Mullainathan (2004), "How Much Should We Trust Difference in Difference Estimates," *Quarterly Journal of Economics*, 119(1): 249-276.

Wooldridge, J. (2005), "Cluster Sample Methods in Applied Econometrics," *American Economic Review Papers and Proceedings*, 93(2): 133-138.

Matching Techniques (Weeks 3-5)

Angrist and Pischke, chapter 3, page 68-91.

Imbens, Guido and Jeffrey Wooldridge (2009), "Recent Developments in the Econometrics of Program Evaluation," *Journal of Economic Literature* 47(1, March): 5-86.

Wooldridge, chapter 21.

Rosenbaum, Paul and Donald Rubin (1983), "The Central Role of the Propensity Score in Observational Studies for Causal Effects," *Biometrika* 70(1): 41-55.

Mueser, P., K. Troske and A. Gorislavsky (2007), "Using State Administrative Data to Measure Program Performance," *Review of Economic and Statistics* 89(4) (November): 761-783.

Busso, Marias, John DiNardo, Justin McCrary (2014), "New Evidence on the Finite Sample Properties of Propensity Score Matching and Reweighting Estimators," *Review of Economics and Statistics* 96: 885-897.

Huber, Martin, Michael Lechner and Conny Wunsch (2013), "The Performance of Estimators Based on the Propensity Score," *Journal of Econometrics*, 175: 1-21.

Bodory, Hugo, et al. (2018), "The Finite Sample Performance of Inference Methods for Propensity Score Matching and Weighting Estimators," *Journal of Economics and Business Statistics* (published online October 16).

Lechner, Michael and Anthony Strittmatter (2017), "Practical Procedures to Deal with Common Support Problems in Matching Estimation," IZA Discussion Paper No 10532 (January).

Regression Discontinuity (Weeks 6-7)

Angrist and Pischke, chapter 6.

Imbens, Guido and Thomas Lemieux (2007), "Regression Discontinuity Designs: A Guide to Practice," *Journal of Econometrics* 142(2): 615-35.

Jepsen, C., P. Mueser and K. Troske (2015), "Labor-Market Returns to the GED Using Regression Discontinuity Analysis," *Journal of Political Economy* 124(3):621-649.

Synthetic Control (Weeks 8-9)

Abadie, Alberto, Alexis Diamond, and Jens Hainmueller (2010), "Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program," *Journal of the American Statistical Association*, 105(490, June): 493-505.

Sommers, Benjamin D., Katherine Baicker, and Arnold M Epstein (2012), “Mortality and Access to Care among Adults after State Medicaid Expansions,” *New England Journal of Medicine* 367(11): 1025-1034.

Duration and Hazard Models (Week 9-10)

Wooldridge, selections from chapter 22.

Greene, William (2007), “Models for Counts and Duration,” chapter 26 in *Econometric Analysis*, 6th Edition, Prentice Hall.

Meyer, Bruce D. (1990), “Unemployment Insurance and Unemployment Spells,” *Econometrica* 58(4) (July): 757-782

Brown, Scott (2016), “The Influence of Homebuyer Education on Default and Foreclosure Risk: A Natural Experiment,” *Journal of Policy Analysis and Management* 35(1): 145-172

Discrete Dependent Variables (Week 11)

Wooldridge, selections from chapter 15.

Quantile Regression (Week 12-15)

Angrist and Pischke, chapter 7.

Koenker, Roger and Kevin Hallock (2001), “Quantile Regression,” *Journal of Economic Perspectives* 15(4): 143-156.

Buchinsky, Moshe (1998), “Recent Advances in Quantile Regression Models: A Practical Guide for Empirical Research,” *Journal of Human Resources* 33: 88-126.

ACADEMIC INTEGRITY POLICY

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Academic Dishonesty includes but is not necessarily limited to the following:

- A. Cheating or knowingly assisting another student in committing an act of cheating or other academic dishonesty.
- B. Plagiarism, which includes but is not necessarily limited to submitting examinations, themes, reports, drawings, laboratory notes, or other material as one's own work when such work has been prepared by another person or copied from another person.
- C. Submitting written materials (papers, assignments) to meet requirements in more than one course unless the instructors in all courses have been informed and given their permission.
- D. Unauthorized possession of examinations or reserve library materials, or laboratory materials or experiments, or any other similar actions.
- E. Unauthorized changing of grades or markings on an examination or in an instructor's grade book or such change of any grade report.

ACADEMIC INTEGRITY PLEDGE: *"I strive to uphold the University values of respect, responsibility, discovery, and excellence. On my honor, I pledge that I have neither given nor received unauthorized assistance on this work."* Students are expected to adhere to this pledge on all graded work whether or not they are explicitly asked in advance to do so.

The University has specific academic dishonesty administrative procedures. Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments. In instances where academic integrity is in question, faculty, staff and students should refer to Article VI of the Faculty Handbook. Article VI is also available in the M-Book. Article VI provides further information regarding the process by which violations are handled and sets forth a standard of excellence in our community.

STUDENTS WITH DISABILITIES:

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let the instructor know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Office of Disability Services (<http://disabilityservices.missouri.edu>), S5 Memorial Union, 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.

THE DEPARTMENT OF ECONOMICS EXAM ACCOMMODATION PROCEDURE FOR STUDENTS WITH DISABILITIES:

1. A disabled student who wants accommodations for an exam in Economics course must present the course instructor with a Letter of Accommodation from the Office of Disability Services (ODS) that documents the accommodations the student is entitled to receive. This should be done as early in the semester as possible.

2. For each accommodated exam, the student should bring the course instructor an Adaptive Examination Request Form from ODS. The course instructor is not required to accept such a request unless the student has first provided the instructor with a Letter of Accommodation. ODS policies require that this form be provided to at least 7 business days in advance for hourly examinations and by Thanksgiving Break (Spring Break) for fall (spring) final examinations.
3. The student section of the form must be properly filled out (including consistency with the Letter of Accommodation regarding the accommodations) and signed by the student. The course instructor must fill out the instructor portion including a note in the SPECIAL INSTRUCTIONS box and sign the form.
4. The white and pink copies of the form are given back to the student and the student must submit the white copy to ODS.

INTELLECTUAL PLURALISM STATEMENT

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the Office of Students Rights and Responsibilities (<http://osrr.missouri.edu/>); or the MU Equity Office (<http://equity.missouri.edu/>), or by email at equity@missouri.edu. All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

UNIVERSITY OF MISSOURI-COLUMBIA NOTICE OF NONDISCRIMINATION

The University of Missouri System is an Equal Opportunity/ Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age, disability or status as a Vietnam-era veteran. Any person having inquiries concerning the University of Missouri-Columbia's compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans With Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, Human Resource Services, University of Missouri-Columbia, 130 Heinkel Building, Columbia, Mo. 65211, (573) 882-4256, or the Assistant Secretary for Civil Rights, U.S. Department of Education.

GRIEVANCE POLICY

Information concerning student grade appeal procedures and non-academic grievances and appeals may be found in the Student Handbook.

POLICY REGARDING RECORDING

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.