

University of Missouri-Columbia
Department of Economics
ECON 9447: Advanced Empirical Methods II, Topics in Policy Analysis
 T/TH 11 am - 12:15 pm
 Locust Street Building, E204B

Professor: Brittany Street

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Office: Locust Street Building, E227

Office hours: T/Th 12:15 - 1 pm

Zoom link: <https://umsystem.zoom.us/j/95228864689> (must be signed into MU account)

Objectives: This course will train you in the current best practices of empirical microeconomics, focusing on policy evaluation covering Randomized Control Trials (RCTs), Regression Discontinuity Designs (RDDs), Instrumental Variables (IVs), and Difference-in-Differences (DiDs) along with special topics (e.g., standard errors, weighting, power calculations, descriptive analysis). Specifically, students will learn the fundamentals including strengths and weaknesses, how to create and present the empirical evidence, and how to replicate each approach.

Prerequisite(s): ECONOM 9446 (may be waived with instructor approval)

Reading Material:

The majority of the class will focus on reading journal articles which will be available through the Canvas page and listed below.

Course Requirements and Grading:

Unit Assignments: 40%

Referee Report: 10%

End of Semester Project: 20%

Final Exam: 30%

Tentative Course Schedule

Week & dates	Topic
1 Jan 21 Jan 23	Syllabus & Overview of course Overview Continued
2 Jan 28 Jan 30	Random Control Trials & Audit Studies
3 Feb 4 Feb 6	Regression Discontinuity Design
4 Feb 11 Feb 13	Regression Discontinuity Design continued
5 Feb 18 Feb 20	Instrumental Variables
Feb 24	<i>Last day to drop without a grade</i>
6 Feb 25 Feb 27	Instrumental Variables continued
7 Mar 4 Mar 6	Difference-in-differences

8	Mar 11 Mar 13	Difference-in-differences continued
9	Mar 18 Mar 20	Triple Difference-in-differences Synthetic Control
	Mar 25 Mar 27	<i>Spring Break</i> <i>No Class</i>
10	Apr 1 Apr 3	Descriptive analysis overview Machine Learning
11	Apr 8 Apr 10	Standard Errors and Inference Clustering, Permutation Inference & Bootstrapping & FDR
12	Apr 15 Apr 17	Miscellaneous topics: weighting, composition, power calculations
13	Apr 22 Apr 24	Wrap-up class Seminar Speaker
14	Apr 29 May 1	Seminar Speaker from policy groups, industry, and government Seminar Speaker (e.g., U.S. Census, Mathematica, RAND Corporation)
	May 5	Last day to withdraw
15	May 6 May 8	End of semester presentations
	May 12 10 am – 12:00 pm	Final Exam

SELECTED READINGS:

Random Control Trials & Audit Studies:

Babcock, Linda, Maria P. Recalde, Lise Vesterlund, and Laurie Weingart. "Gender differences in accepting and receiving requests for tasks with low promotability." *American Economic Review* 107, no. 3 (2017): 714-747.

Bertrand, Marianne, and Sendhil Mullainathan. "Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination." *American Economic Review* 94, no. 4 (2004): 991-1013.

Duflo, Esther, Rema Hanna, and Stephen P. Ryan. "Incentives work: Getting teachers to come to school." *American Economic Review* 102, no. 4 (2012): 1241-1278.

Regression Discontinuity Design:

Almond, Douglas, Joseph J. Doyle Jr, Amanda E. Kowalski, and Heidi Williams. "Estimating marginal returns to medical care: Evidence from at-risk newborns." *The Quarterly Journal of Economics* 125, no. 2 (2010): 591-634.

Barreca, Alan I., Melanie Guldi, Jason M. Lindo, and Glen R. Waddell. "Saving babies? Revisiting the effect of very low birth weight classification." *The Quarterly Journal of Economics* 126, no. 4 (2011): 2117-2123.

Lee, David S., Enrico Moretti, and Matthew J. Butler. "Do voters affect or elect policies? Evidence from the US House." *The Quarterly Journal of Economics* 119, no. 3 (2004): 807-859.

Mueller-Smith, Michael, and Kevin T. Schnepel. "Diversion in the criminal justice system." *The Review of Economic Studies* 88, no. 2 (2021): 883-936.

Instrumental Variables:

Angrist, Joshua, and William N. Evans. "Children and their parents' labor supply: Evidence from exogenous variation in family size." *American Economic Review* (1998).

Dobbie, Will, Jacob Goldin, and Crystal S. Yang. "The effects of pre-trial detention on conviction, future crime, and employment: Evidence from randomly assigned judges." *American Economic Review* 108, no. 2 (2018): 201-240.

Frandsen, Brigham, Lars Lefgren, and Emily Leslie. "Judging judge fixed effects." *American Economic Review* 113, no. 1 (2023): 253-277.

Chyn, Eric, Brigham Frandsen, and Emily C. Leslie. *Examiner and Judge Designs in Economics: A Practitioner's Guide*. No. w32348. National Bureau of Economic Research, 2024.

Difference-in-Differences: Wooldridge 2024;

Alpert, Abby, David Powell, and Rosalie Liccardo Pacula. "Supply-side drug policy in the presence of substitutes: Evidence from the introduction of abuse-deterrent opioids." *American Economic Journal: Economic Policy* 10, no. 4 (2018): 1-35.

Arkhangelsky, Dmitry, Susan Athey, David A. Hirshberg, Guido W. Imbens, and Stefan Wager. "Synthetic difference-in-differences." *American Economic Review* 111, no. 12 (2021): 4088-4118.

Baker, Andrew C., David F. Larcker, and Charles CY Wang. "How much should we trust staggered difference-in-differences estimates?." *Journal of Financial Economics* 144, no. 2 (2022): 370-395.

Cengiz, Doruk, Arindrajit Dube, Attila Lindner, and Ben Zipperer. "The effect of minimum wages on low-wage jobs." *The Quarterly Journal of Economics* 134, no. 3 (2019): 1405-1454.

Cheng, Cheng, and Mark Hoekstra. "Does strengthening self-defense law deter crime or escalate violence?: Evidence from expansions to castle doctrine." *Journal of Human Resources* 48, no. 3 (2013): 821-854.

Dynarski, Susan M. "Does aid matter? Measuring the effect of student aid on college attendance and completion." *American Economic Review* 93, no. 1 (2003): 279-288.

Wing, Coady, Seth M. Freedman, and Alex Hollingsworth. *Stacked difference-in-differences*. No. w32054. National Bureau of Economic Research, 2024.

Other:

Agan, Amanda, Matthew Freedman, and Emily Owens. "Is your lawyer a lemon? Incentives and selection in the public provision of criminal defense." *Review of Economics and Statistics* 103, no. 2 (2021): 294-309.

Anderson, Michael L. "Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association* 103, no. 484 (2008): 1481-1495.

Oster, Emily. "Unobservable selection and coefficient stability: Theory and evidence." *Journal of Business & Economic Statistics* 37, no. 2 (2019): 187-204.

ATTENDANCE/LATE ASSIGNMENTS/MISSED EXAMS:

Attendance is not mandatory but highly recommended. If you miss class, please arrange to get notes from a classmate. Late assignments will not be accepted without a university excused absence or speaking with me first to arrange for special circumstances. Make-up exams will be arranged for students with approved absences or circumstances that prevented taking the exam as scheduled. Make-up exams will cover the same content but may be in an alternative format.

Please do **not** come to class if you are sick or feverish. You are welcome to bring your child to class if childcare falls on a class day; this is not meant to be a regular solution, but these things are bound

to come up and I am happy to welcome a visitor to the class. Please just sit near an exit so that you can exit if necessary with minimal disruptions.

ACCOMMODATION OF 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 me know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please establish an accommodation plan with the [MU Disability Center](#), S5 Memorial Union, 573-882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for persons with disabilities, click on “Disability Resources” on the MU homepage.

ACADEMIC INTEGRITY

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.

You are allowed to discuss homework assignments with classmates, but you are not allowed to copy each other’s work, use past assignments, or use AI assistance (e.g., chatGPT).

INTELLECTUAL PLURALISM

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](#); the [MU Equity Office](#), or equity@missouri.edu.

All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

ACADEMIC INQUIRY, COURSE DISCUSSION, AND PRIVACY

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 not make audio or video recordings of course activity, except students permitted to record as an accommodation under section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of class activity 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.

Those students who are permitted to record are not permitted to redistribute audio or video recordings of statements or comments from the course to individuals who are not students in the course 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.

Similarly, students are not permitted to share or post lecture slides, homework assignments, or other class materials.

MENTAL HEALTH

The University of Missouri is committed to supporting student well-being through an integrated network of care, with a wide range of services to help students succeed. The MU Counseling Center offers professional mental health care, and can help you find the best approach to treatment based on your needs. Call to make an appointment at 573-882-6601. Any student in crisis may call or go to the MU Counseling Center between 8:00-5:00 M-F. After hours phone support is available at 573-882-6601.

Visit our website at <https://wellbeing.missouri.edu/> to take an online mental health screening, find out about workshops and resources that can help you thrive, or learn how to support a friend.

TITLE IX

University of Missouri policies prohibit discrimination on the basis of race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, pregnancy, age, genetic information, disability and protected veteran status. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. Sex-based violence includes rape, sexual assault, unwanted touching, stalking, dating/interpersonal violence, and sexual exploitation.

If you experience discrimination, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at civilrights.missouri.edu or call 573-882-3880. You also may make an anonymous report online.

Students may also contact the Relationship & Sexual Violence Prevention (RSVP) Center, a confidential resource, for advocacy and other support related to rape or power-based personal violence at rsvp@missouri.edu or 573-882-6638, or go to rsvp.missouri.edu.

Both the [Office for Civil Rights & Title IX](http://civilrights.missouri.edu) and the [RSVP Center](http://rsvp.missouri.edu) can provide assistance to students who need help with academics, housing, or other issues.

ADDITIONAL TITLE IX INFORMATION:

In the event that you choose to write or speak about having survived sexualized violence, including rape, sexual assault, dating violence, domestic violence, or stalking Mizzou policies require that, as your instructor, I share this information with Ellen Eardley, MU Title IX Administrator. Ellen or her trusted colleague will contact you to let you know about accommodations and support services at MU as well as options for holding accountable the person who harmed you. **You are not required to speak with them.**

If you do not want the Title IX Administrator notified, instead of disclosing this information to your instructor, you can speak confidentially with the following people on campus and in the community. They can connect you with support services and help explore your options now, or in the future.

- MU Relationship and Sexual Violence Prevention Center: rsvp.missouri.edu - (573)882-6638
- MU Counseling Center: counseling.missouri.edu - (573)882-6601
- MU Behavioral Health: studenthealth.missouri.edu/services/mental.html - (573)882-1483
- True North (24/7 crisis center and shelter): truenorthofcolumbia.org - (800)548-2480

If you are a survivor or someone concerned about a survivor and need immediate information on what to do, please go to RSVP.missouri.edu/get-help.