

University of Maryland, Department of Economics
ECON 455: Economics of Education Policy
Course Syllabus – Summer Session II, 2020 (7/13/2020-8/21/2020)

Prof. George Zuo (rhymes with “oh”)
gzuo@umd.edu
Office Hours: TBD

Course Description:

This course introduces students to perspectives and methods used in the economics of education. Students will critically survey the research frontier in economics on policies and practices used to promote learning and bridge achievement gaps in the United States. Topics include education inequality, the role of schools, teachers, and policies in raising student achievement, education finance, and increasing access to higher education. The course emphasizes students’ ability to distinguish causal evidence from anecdotal/correlational evidence and to make predictions about the potential impacts of education reform.

Class Meetings:

- Lecture (mandatory): Monday and Wednesday via Zoom, 6pm – 7:30pm
- A weekly ~1 hour asynchronous pre-recorded lecture
- Office Hours: TBD

Zoom Link: <https://umd.zoom.us/j/4698657133>

Textbooks:

- *Recommended (though not required):* Joshua Angrist and Jorn-Steffen Pischke. Mastering ‘Metrics: The Path from Cause to Effect. Princeton University Press, 2014.

This book provides an introduction to quantitative methods in economics. It is written towards an audience with little prior exposure to probability, statistics, and econometrics. The book is a little cheesy and some parts will still be too technical for our use, but it overall does a good job at presenting ideas we will use throughout the course. From Amazon, you can purchase the book for \$20, or rent it through the end of summer for as little as \$7.

- *Optional:* Michael Lovenheim and Sarah Turner. Economics of Education. Macmillan Learning, 2018.

This textbook has been used in previous iterations of the course but I will not be teaching directly from it. You may use it as supplementary reading, if desired.

Most of the course readings will involve original research and policy papers. Some of the research articles may contain technical material that is beyond the scope of this course, and students will not be expected to master techniques beyond the basic principles discussed in lecture. Students should do the reading with the aim of understanding the research question, the quality of evidence provided, and the resulting policy implications.

Grading

Category	Contribution to Total Grade
Class Participation	20% → Attendance 10% / Lecture Participation 10%
5 Homework Assignments	20%
2 Policy Memos	Memo 1: 10%; Memo 2: 15%
5 Quizzes	10% or 20%
Final Exam	25% or 15%

A+: 97-100%

B+: 87-89%

C+: 77-79%

D+: 66-69%

A: 93-96%

B: 83-86%

C: 73-76%

D: 65 and lower

A-: 90-92%

B-: 80-82%

C-: 70-72%

Class Participation (20%)

Your classroom participation grade is divided evenly between attendance and lecture participation.

Attendance is mandatory given the online nature of this course. In cases of extenuating circumstances, students will be allowed to miss one class session. A second absence will result in a 5% deduction from your overall grade. A third absence will result in a full 10% deduction (i.e. a full letter grade). Repeated tardiness may affect your attendance grade at the instructor's discretion.

A portion of your grade comes from participation during lecture. Zoom provides a number of ways for us to interact together that we will go over during our first meeting. I will be regularly asking for students to participate. This will typically involve: 1) interpreting charts/graphs, 2) responding to polls, 3) identifying and discussing problematic statements, and more. If you are not comfortable participating in class, I strongly urge you to come to participate in discussion/office hours.

Homework (20%)

Five homework assignments will be due throughout the course (see *Course Schedule*). Group work is encouraged, but students must submit their own work; heavily borrowed work will not be accepted.

Policy memos (25%)

Two policy memos will be due on August 3 and August 21 at 9pm; topics will be posted on ELMS one week in advance of the due date.

Policy memos will require students to apply economic concepts and interpret data for the purpose of providing proposals relating to specific policy scenarios. Students are encouraged to consult sources outside of the required reading list for background information and evidence. Memos should not exceed 2 pages (12- point font, 1" margins). Memos must be submitted via ELMS.

Quizzes and Final Exam (35%)

5 weekly quizzes will be given throughout the semester (see *Course Schedule*). The quiz will open on ELMS immediately after class concludes each Wednesday, and you have until midnight to complete it. The quiz is open-book but is also timed: you will have 20 minutes from the moment you access the quiz.

These quizzes are meant to test basic understanding of the core concepts taught in class as well as course readings; no trick questions, obscure details, or other shenanigans. They should be straightforward if you pay attention in class and complete the homework/readings. Each quiz will typically contain three questions, and the material covered is cumulative. The quizzes are meant to be low-stakes, as each only counts for 2.5% of your grade. The lowest score will be dropped. The quizzes are open-book, but be warned quiz has a time limit

Why quiz? The “testing effect” is a well-documented phenomenon in psychological sciences that is linked to greater learning retention. In multiple studies utilizing randomized experiments (e.g. Roediger et al., *Journal Experimental Psychology* 2011; Agarwal et al., *Journal of Educational Psychology* 2011), psychologists have shown that quizzing produces a significant improvement relative to no-quizzing and “directed review” of concepts (e.g. lecture-style review sessions). Additionally, delaying quizzing (i.e. quizzing concepts learned further in the past) forces the brain to “retrieve” information and strengthens the neural networks that connect concepts learned in class (Roediger and Karpicke, *Psychological Science* 2006). Based on this evidence, there will be low-stakes quizzes each week. Each quiz will typically have one question based on current material and one easier question based on past material.

The final exam will be held online on the last day of class (8/19). The format of the exam may include computation, short answer, and essay questions. Make-up exams will be granted only to those students who communicate with the professor within 48 hours of the scheduled exam time and provide written verification of a reason that complies with University policy: medical conditions, religious observances, participation in University events at the request of University authorities, and compelling circumstances beyond your control. If a student misses an exam and cannot document a valid excuse, the grade will be recorded as a zero. The final exam will be cumulative.

Note: Students who do well can opt for quizzes to count for 20% of the final grade, as opposed to 10%. Those who choose this option will have their test score contribution reduced from 25% to 15%.

Academic Integrity: The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. See www.studenthonorcouncil.umd.edu.

Course Website: Students should use their directory ID and password to access www.elms.umd.edu. Relevant documents and announcements will be posted on the course website. It is expected that students will check the course website regularly.

Accessibility: Students with disabilities who require special accommodations must get in touch with the instructor within the first three weeks of class.

Expectations of Students: Students are expected to read the assigned readings before the class in which they will be covered. Many of the readings are original research, and may be too technical for this course. Students are expected to read the introduction and the tables/figures for these papers. Assignments are due by the beginning of class. Students that miss lectures are still responsible for the material that was covered.

Course Outline

All slides, assignments, and readings will be posted to ELMS the week prior to lecture.
(Readings may be subject to change)

Week 1 (7/13, 7/15)

- Assignments Due: Homework #1: Student Questionnaire (7/14)
- Quizzes: Quiz #1 (7/15)
- Pre-Recorded Lecture: “1. Quasi-experimental methods”
- Required Readings:
 - Goldin, Claudia and Lawrence F. Katz. 2008. The Race between Education and Technology (Belknap Press), Ch. 1 (pp. 11-41).
 - *Mastering 'Metrics*, Intro+Ch. 1 ([available publicly](#) through Princeton University Press)
 - [Causal Inference Animated Plots](#), by Prof. Nick Huntington-Klein

Lecture 1 (7/13): The Economics of Education

- Introduction, Syllabus
- The Value of Education
- Education Production
- Decision-making in Education
- Education inequality

Lecture 2 (7/15): The Economists' Quantitative Toolkit

- Correlation vs. Causation, Causal Inference
- Omitted Variables Bias, Randomized Controlled Trials (Experiments), Linear Regression
- Primer to Quasi-Experimental Methods: Differences-in-Differences, Instrumental Variables, Regression Discontinuity

--- * ---

Week 2 (7/20, 7/22)

- Assignments Due: Homework #2 (7/20)
- Quizzes: Quiz #2 (7/22)
- Pre-Recorded Lecture: “2. Digesting research articles”
- Required Readings:
 - Cascio, Elizabeth and Diane W. Schanzenbach. 2014. “Expanded Preschool Access for Disadvantaged Children,” The Hamilton Project, pp. 1-13.
 - Oreopoulos, Philip and Kjell G. Salvanes. 2011. “Priceless: The Nonpecuniary Benefits of Schooling,” Journal of Economic Perspectives 25 (Winter), pp. 159-84.

Lecture 3 (7/20): Learning, Development, and Early Childhood Education

- Measuring Learning and Achievement
- Early Childhood Education/Pre-K Programs

Lecture 4 (7/22): Schools and Education Production

- Determinants of School Quality
- Charter Schools, School Turnarounds
- School Choice

--- ** ---

Week 3 (7/27, 7/29)

- Assignments Due: Homework #3 (7/27)
- Quizzes: Quiz #3 (7/29)
- Pre-Recorded Lecture: “3. Writing Policy Memos”
- Required Readings:
 - Jackson, C. Kirabo. 2019. “The Full Measure of a Teacher,” Education Next 19 (Winter), pp. 63-68.
 - Fryer, Jr., Roland, Steven D. Levitt, John List, and Sally Sadoff. 2012. “Enhancing the Efficacy of Teacher Incentives through Loss Aversion: A Field Experiment”. NBER Working Paper Series, #18237.

Lecture 5 (7/27): Learning and Achievement

- How to Incentivize Learning
- Peer Effects
- Classroom Conditions

Lecture 6 (7/29): Teachers

- Teacher Quality/Value-Add
- Teacher Pay
- Teacher Evaluation and Development

--- ** ---

Week 4 (8/3, 8/5)

- Assignments Due: Policy Memo #1 (8/3)
- Quizzes: Quiz #4 (8/5)
- Pre-Recorded Lecture: “4. Youth Misbehavior and Crime”
- Required Readings:
 - Jackson, C. Kirabo, Rucker C. Johnson and Claudia Persico. 2015. “Boosting Educational Attainment and Adult Earnings.” Education Next 15(4) Fall, pp. 69-76.
 - Schwerdt, Guido, Martin R. West, and Marcus A. Winters. 2017. “The Effects of Test-Based Retention on Student Outcomes over Time: Regression Discontinuity Evidence from Florida.” Journal of Public Economics 152, pp. 154-169.

Lecture 7 (8/3): Behavioral Economics in Education

- Information Asymmetry
- Behavioral Nudges

- Hyperbolic discounting, attribution bias, stereotype threat

Lecture 8 (8/5): Education Finance

- How K-12 is Financed
- School Finance Equalization
- How U.S. Higher Education is Financed

--- ** ---

Week 5 (8/10, 8/12)

- Assignments Due: Homework #4 (8/10)
- Quizzes: Quiz #5 (8/12)
- Pre-Recorded Lecture: “5. College Mobility Report Cards”
- Required Readings:
 - Hoxby, Caroline and Sarah Turner. (2013). “Expanding College Opportunities,” Education Next 13(4) Fall, pp. 67-73.
 - Pallais, Amanda. 2015. “Small Differences that Matter: Mistakes in Applying to College.” Journal of Labor Economics, 33(2), pp. 493-520.

Lecture 9 (8/10): The Returns to College

- The Returns to a College Degree
- Access to College Returns
- Intergenerational Mobility

Lecture 10 (8/12): Increasing College Access and Completion

- Financial Barriers
- Behavioral Barriers
- Academic Barriers

--- ** ---

Week 6 (8/17, 8/19)

- Assignments Due: Homework #5: Exam Review (8/17), Memo #2 (8/21)
- Quizzes: None; **Final exam on 8/19.**
- Pre-Recorded Lecture: None
- Required Readings: None

Lecture 11 (8/17): Alternate Routes to Higher Education

- Community College
- General Education Development Test (GEDs)
- Career and Technical Education (CTE)
- Online Degrees

Final Exam (8/19)