# SIMON FRASER UNIVERSITY DEPARTMENT OF ECONOMICS

Course: ECON453

**Title:** Seminar in the Economics of Education

Semester: Spring 2022-2023

Class Timing: Monday: 9:30 am—12:20 pm

**Class Location:** WMC3533

**Instructor:** Pierre Mouganie

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Office Number: 2686

Office Hours: Monday: 2:00-4:00 pm

**Prerequisites:** Prerequisite: <u>ECON 201</u> or 301 and ECON (or BUEC) 333, all with a minimum grade of C-. If you feel you may be deficient in any of these areas, you should contact me as soon as possible.

**Description:** Economists and policymakers often seek to measure and understand how educational inputs and/or educational interventions impact students. These impacts may have significant short and long-run consequences on students, particularly as they enter the labor market. More generally, we often want to assess the real-world effects of some potential "cause" on an "outcome." For example, does a university degree increase future earnings? Does the type of university one attends matter? Do school peers have any short- or long-term impact on students? Can teachers impact students' long run outcomes? Do role models in education matter?

This course will first introduce you to the statistical and econometric methods that applied researchers use to answer causal questions in the economics of education. These methods include randomized experiments, regression discontinuity, difference-in-differences, and instrumental variables. We will then discuss theoretical foundations of how economists approach questions of education. There will be regular graded assignments to make sure that you are keeping track of the class. Additionally, I will be occasionally holding in-class pop quizzes to make sure you are keeping up with the weekly readings. By the end of the course, you will learn how to critically evaluate statements about causal relationships in education. Additionally, you will be able to evaluate and come up with your own research ideas in the economics of education.

**Grading:** Participation and in class mini quizzes (10%),

Home Assignments (3 Total) (20%)

Leading or discussing a paper during class (20%)

End of semester presentation of a paper (20%) (Due date TBA) Writing a fully developed research proposal (30%) (Due date TBA)

**Required Text:** None. This class will be based on my class notes and academic papers/readings that I will post online.

Suggested Text 1: M. Lovenheim and S. Turner "Economics of Education, First Edition"

**Suggested Text 2:** J. D. Angrist and J.-S. Pischke "Mastering 'Metrics: The Path from Cause to Effect," Princeton University Press (2014).

## **Detailed List of topics and readings.**

Note: not all of the below readings are required, but all are recommended. I will let you know which readings are required on a week-to-week basis.

Week 1: Introduction---The Education Production Function: How Economists Think About Education.

Weeks 2 through 4: Review/Introduction of empirical methods: OLS and Random Assignment, Instrumental Variables, Differences-in-Differences, Regression Discontinuity Design.

Week 5: The Returns to Education: Where it all Began!

Mincer, J. (1974). Schooling, Experience, and Earnings. Human Behavior & Social Institutions No. 2.

J. Angrist and A. Krueger, "Does Compulsory School Attendance Affect Schooling and Earnings?" Quarterly Journal of Economics, (4), 1991, pp. 979-1014.

O. Ashenfelter and A. Krueger. 1994. "Estimates of the Economic Return to Schooling from a New Sample of Twins." American Economic Review, 84(5), 1994, pp. 1157-73.

Card, D. 1993. "Using Geographic Variation in College Proximity to Estimate the Return to Schooling." NBER Working Paper, 4483.

Card, D. (2001) "Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems," Econometrica, 69(5), 1127-1160.

Week 6: The Returns to Quality of Education---Higher Education

Dale, S. B., & Krueger, A. B. 2002. Estimating the payoff to attending a more selective college: An application of selection on observables and unobservables. The Quarterly Journal of Economics, 117(4), 1491-1527.

Dale, S. B., & Krueger, A. B. 2014. Estimating the effects of college characteristics over the career using administrative earnings data. Journal of Human Resources, 49(2), 323-358.

Hoekstra, M. 2009. The effect of attending the flagship state university on earnings: A discontinuity-based approach. The Review of Economics and Statistics, 91(4), 717-724.

S. Zimmerman. 2014. "The Returns to College Admission for Academically Marginal Students," Journal of Labor Economics. October 2014, pp. 711-754.

Week 7: The Returns to Quality of Education--- High Schools.

Abdulkadiroglu, A., J. Angrist, and P. Pathak, 2014. The elite illusion: Achievement effects at Boston and New York exam schools. Econometrica 82, no. 1:137-196.

Clark, D., and E. Del Bono. 2016. The long-run effects of attending an elite school: Evidence from the United Kingdom. American Economic Journal: Applied Economics 8, no. 1:150-176.

Hoekstra, M., P. Mouganie, and Y. Wang. 2018. "Peer quality and the academic benefits to attending better schools." Journal of Labor Economics 36, no. 4 (2018): 841-884.

Pop-Eleches, C., and M. Urquiola. 2013. Going to a better school: Effects and behavioral responses. American Economic Review 103 no. 4:1289-1324.

#### Week 8: Peer Effects in Education

Hoxby, C. M. (2000). Peer effects in the classroom: Learning from gender and race variation.

Carrell, S. E., Sacerdote, B. I., & West, J. E. (2013). From natural variation to optimal policy? The importance of endogenous peer group formation. Econometrica, 81(3), 855-882.

Carrell, S. E., & Hoekstra, M. L. (2010). Externalities in the classroom: How children exposed to domestic violence affect everyone's kids. American Economic Journal: Applied Economics, 2(1), 211-28.

Imberman, S. A., Kugler, A. D., & Sacerdote, B. I. (2012). Katrina's children: Evidence on the structure of peer effects from hurricane evacuees. American Economic Review, 102(5), 2048-82.

#### Week 9: The Effect of Class Size.

Angrist, J. D., & Lavy, V. (1999). Using Maimonides' rule to estimate the effect of class size on scholastic achievement. *The Quarterly journal of economics*, 114(2), 533-575.

Hoxby, C. M. (2000). The effects of class size on student achievement: New evidence from population variation. The Quarterly Journal of Economics, 115(4), 1239-1285.

Fredriksson, P., Öckert, B., & Oosterbeek, H. (2013). Long-term effects of class size. The Quarterly journal of economics, 128(1), 249-285.

# Week 10: Role Models in Education Part 1: Do Teachers and Professors Matter?

Carrell, S. E., & West, J. E. (2010). Does professor quality matter? Evidence from random assignment of students to professors. *Journal of Political Economy*, *118*(3), 409-432.

Chetty, R., J. Friedman, and J. Rockoff. 2014. "Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood." American Economic Review, 104 (9): 2633-79.

Jackson, C. K. (2018). What do test scores miss? The importance of teacher effects on non–test score outcomes. *Journal of Political Economy*, 126(5), 2072-2107.

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American economic review*, *94*(2), 247-252.

**Week 11:** Role Models in Education Part 2: The Role of High School Counselors and University Advisors.

Canaan, S., Deeb, A., & Mouganie, P. (2019). Advisor value-added and student outcomes: Evidence from randomly assigned college advisors (No. 12739). IZA Discussion Papers.

Carrell, S., & Sacerdote, B. (2017). Why Do College-Going Interventions Work? American Economic Journal: Applied Economics, 9(3), 124-151.

Mulhern, C. (2020). Beyond teachers: Estimating individual guidance counselors' effects on educational attainment. Institute of Education Sciences, Harvard University.

# Week 12: Signaling versus Human Capital: Do we know why Education Matters?

Arteaga, C. (2018). The effect of human capital on earnings: Evidence from a reform at Colombia's top university. Journal of Public Economics, 157, 212-225.

Clark, D., & Martorell, P. (2014). The signaling value of a high school diploma. Journal of Political Economy, 122(2), 282-318.

Tyler, J. H., Murnane, R. J., & Willett, J. B. (2000). Estimating the labor market signaling value of the GED. The Quarterly Journal of Economics, 115(2), 431-468.

### Week 13: Match Effects in Education: The Role of Race and Gender

Carrell, S. E., Page, M. E., & West, J. E. (2010). Sex and science: How professor gender perpetuate the gender gap. *The Quarterly Journal of Economics*, 125(3), 1101-1144.

Gershenson, S., Hart, C. M., Hyman, J., Lindsay, C., & Papageorge, N. W. (2018). *The long-run impacts of same-race teachers* (No. w25254). National Bureau of Economic Research.

Kofoed, M. S. (2019). The effect of same-gender or same-race role models on occupation choice evidence from randomly assigned mentors at west point. *Journal of Human Resources*, *54*(2), 430-467.

Porter, C., & Serra, D. (2020). Gender differences in the choice of major: The importance of female role models. *American Economic Journal: Applied Economics*, 12(3), 226-54.

## **Course Policy:**

- 1. Attendance policy: attendance is expected for all lectures and absences should be kept to a minimum.
- 2. Discipline policy: Students are expected to come to class on time and leave the class on time. Students are expected to behave well in class by not disturbing the instructor or other students. Students are expected not to talk, **not to use their mobile phones**, not to let their mobile phones ring during class, etc...

- 3. Cheating policy: Students are expected NOT to cheat on any assignments or quizzes. If a student cheats according to the cheating criteria set by SFU, the name of the student will be given to the Disciplinary Committee for action.
- 4. The Department of Economics seeks to promote the values of Equity, Diversity, and Inclusion in relation to our undergraduate and graduate students, administrative staff, sessional instructors, and faculty members. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of ethnicity/race, culture, religion, ability status, socio-economic status, sexual orientation, gender, gender diversity, citizenship, and national origin. We commit to fostering a departmental climate that is welcoming, respectful, and inclusive as well as ensuring that departmental policies and practices are fair.