University of Alaska Anchorage
Department of Economics
Spring 2017 Course Syllabus

ECON A390, Methods for Public Policy Evaluation, 3 Credits
Jan 17, 2017 – May 6, 2017

Instructor:	Prof. Matt Reimer
Phone:	907-786-5430
Email:	mnreimer@uaa.alaska.edu
Office:	MWF: BOC3 315; TR: RH 205N

Location:	RH 206
Time:	TR 2:30p – 3:45p
Office Hours:	TR 3:45p – 4:45p, or by appointment.
	Note that office hours will be held in RH 205N.

Course Prerequisites: ECON A202 with a minimum grade of C. Students are strongly encouraged to have taken an introductory statistics course such as BA A273 or STAT A307.

Textbook and Required Reading:

(A&P) Angrist, J., and J. Pischke. 2015. *Mastering 'Metrics: The Path from Cause to Effect.* 1st Ed. Princeton: Princeton University Press.

- REQUIRED. Paperback and Kindle editions available on Amazon.com.

(WB) Gertler, P., and S. Martinez, P. Premand, L. Rawlings, and C. Vermeersch. 2011. *Impact Evaluation in Practice.* The World Bank.

- REQUIRED. Available as a pdf on Blackboard.

(KH) Khandker, S.R., G.B. Koolwal, H.A. Samad. 2010. *Handbook on Impact Evaluation: Quantitative Methods and Practices*. The World Bank.

- REQUIRED. Available as a pdf on Blackboard.

(MR) Ravallion, M. 2001. "The Mystery of the Vanishing Benefits: An Introduction to Impact Evaluation," *The World Bank Economic Review*, 15(1): 115-140.

Other useful readings:

(M&W) Morgan, S., and C. Winshap. 2007. *Counterfactuals and Causal inference: Methods and Principles for Social Research*. 1st Ed. Cambridge: Cambridge University Press.

- NOT REQUIRED. Key chapters will be posted on Blackboard.

- Note: lectures will draw from the textbooks and journal articles. Supplementary reading material will be posted regularly on the course Blackboard site.

Course Description: Policy evaluation comprises a set of tools designed to assess whether a public program, such as job training, has achieved its intended results, such as increased earnings. This course will introduce students to the fundamentals of causality and causal inference, empirical techniques for estimating program impacts, methods for identifying parameters of policy interest, and integration of evaluation findings into policy decision making.

Class Objectives: The goal of this course is to provide students with a basic knowledge of how to perform statistical methods useful in answering public policy questions using observational or experimental data. It will also assist students in assessing research that claims to answer causal policy questions.

Student Learning Outcomes: By the end of this class, I expect students will be able to:
1. Understand the process of causal inference for evaluating public policy interventions.
2. Critically assess the validity of research that claims to answer causal policy questions.
3. Write concise summaries and critiques of empirical research papers that evaluate public policy interventions.
4. Apply statistical techniques to evaluate real world policy questions using statistical software, such as STATA or SASS.

Communications and availability: The best way to reach me is through email, or by coming to scheduled office hours or at a scheduled appointment. Note that my main office is in the Bragaw Office Center (BOC3 315). The office that I will hold office hours in (RH 205N) is a shared office for faculty from the Institute of Social and Economic Research. I will therefore not always be around Rasmuson Hall, so that a scheduled appointment works better than "dropping in." I will communicate regularly through Blackboard, so students are expected to visit the course Blackboard site on a regular basis and ensure that Blackboard is using a current email address.

Assignments and Evaluation: Students will be graded according to the following scheme:
Reading Summaries   30%
Problem Sets   30%
In-class Participation   15%
Take-home Final Exam   25%

Grades: A = 90-100; B = 80-89; C = 70-79; D = 60-69; F <=59.

Reading Summaries (30%): There are several lectures (approximately 6) that cover direct applications of policy evaluation methods. For each of these lectures, students will write a 2-page (maximum, single spaced) summary and critique of the assigned readings. **Reading summaries must be submitted online on Blackboard by 2:29 pm the day of class** during which the papers will be discussed. Please see the Blackboard site for directions on how to submit assignments. Reading summaries will be given a grade between 1 and 3. I reserve 3-points for exceptional insights and summaries, while 1-point will be given to summaries that have no insight and insufficiently summaries. Late summaries will not be graded and

will receive 0 points. **I will drop the lowest grade on the reading summaries.** *Students are responsible for completing their own reading summaries; group work is not acceptable.* Reading summaries are tentatively due on the following dates:

1. February 9, 2017 (Thursday)
2. February 23, 2017 (Thursday)
3. March 9, 2017 (Thursday)
4. March 28, 2017 (Tuesday)
5. April 11, 2017 (Tuesday)
6. April 20, 2017 (Thursday)

Problem Sets (30%): There will be four problem sets. The problem sets will require students to perform statistical operations in order to apply the material covered in class to actual policy evaluations. *Students are encouraged to work as a group, with a maximum group size of three.* However, students are responsible for handing in their own copy of the problem set (even if it is identical to one of your groups members). It is highly recommended that students use STATA for the problem sets. Students may use a different statistics software package (e.g. SASS) upon my approval; however, I will not provide support for any other software program. **Problem sets—comprised of write-ups to the questions and any code used to perform statistical operations (e.g. STATA dofiles)—must be submitted online on Blackboard by 11:59 pm on the appropriate due date.** Students must include a list of group members that contributed to the problem set. Problem sets are marked down 10% for each day they are late. Problem sets are tentatively due on the following dates:

1. February 13, 2017 (Monday)
2. March 10, 2017 (Friday)
3. April 14, 2017 (Friday)
4. April 28, 2017 (Friday)

In-class Participation (15%): Students are expected to attend class on a regular basis. Students will be graded on their participation in discussions during class time. In addition, each student is expected to lead one of the in-class discussions we will have for the assigned readings (see Reading Summaries above). After the end of the second week of the semester, students will sign up for an assigned reading, and lead a discussion of the reading in class later in the semester.

Take-home Final Exam (25%): Students will be graded on a take-home final exam covering topics presented over the course of the semester. All course materials are fair to use but ***you are not to consult with classmates or faculty or ANY other human being.*** This is to be your work and your opportunity to demonstrate your ability to learn and communicate. I take a very dim view of exams that are identical (see the *Academic Honesty* section below). Students will have one week to complete the take-home exam and must be submitted—along with any STATA code—online on Blackboard by **11:59pm on May 6, 2017.**

Lecture Plan and Readings*:* The following outline describes the topics that will be covered along with anticipated associated readings. Readings highlighted with an ** are required for the reading summaries. Readings highlighted with an * are recommended, not required. Students are responsible

for downloading the papers for discussion from the library website
(http://consortiumlibrary.org/find/journals.php).

January 17 (Tue): Motivation—What is Public Policy Evaluation?
- WB, Chapters 1 & 2.

January 19 (Thr): Causal Inference: Counterfactuals and the Potential Outcome Model
- MR, pp115-120; WB, Chapter 3; A&P, Chapter 1; *M&W, Chapter 2.

January 24 (Tue): Causal Inference: The Role of Statistics I
- Problem Set #1 distributed.
- A&P, Chapter 1 Appendix.

January 26 (Thr): Causal Inference: The Role of Statistics II
- A&P, Chapter 1 Appendix.

January 31 (Tue): No class
- WB, Chapter 4; A&P, Chapter 1.

February 2 (Thr): Random Assignments and Experiments
- WB, Chapter 4; A&P, Chapter 1.

February 7 (Tue): Random Assignments and Experiments
- WB, Chapter 4; A&P, Chapter 1.

February 9 (Thr): Applications of Random Assignment and Experiments
- Reading Summary #1 Due
- **Taubman, Sarah, et al. 2014. "Medicaid Increases Emergency Department Use: Evidence from Oregon's Health Insurance Experiment," *Science*, 343(6168): 263-268.
- **Baicker, Katherine, et al. 2014. "The Impact of Health Insurance on Labor Market Activity and Program Participation: Evidence from the Oregon Health Insurance Experiment," *American Economic Review: Papers and Proceedings*, 104(5): 322-328.

February 14 (Tue): Causal Inference—Causal Graphs
- M&W, Chapter 1 (pp 24-30); M&W, Chapter 3.

February 16 (Thr): Selection on Observables—Regression I
- Problem Set #2 distributed.
- MR, pp120-124; A&J, Chapter 2; *M&W, Chapter 6.

February 21 (Tue): Selection on Observables—Regression II
- A&J, Chapter 2; *M&W, Chapter 6.

February 23 (Thr): Applications of Selection on Observables: Regression
- Reading Summary #2 Due.
- **Black, Sandra. 1999. "Do Better Schools Matter? Parental Valuation of Elementary Education," *Quarterly Journal of Economics*, 114(2): 577-579.

February 28 (Tue): Selection on Observables—Matching I
- MR, pp124-126; A&J, Chapter 2; WB, Chapter 7; *M&W, Chapter 5.

March 2 (Thr): Selection on Observables—Matching II
- A&J, Chapter 2; WB, Chapter 7; KH, Chapter 12.

March 7 (Tue): Demonstration of Selection on Observables: Matching and Regression
- In class demonstration.

March 9 (Thr): Applications of Selection on Observables: Matching

- Reading Summary #3 Due.
- ** Ferraro, P., et al. 2007. "The Effectiveness of Listing Under the U.S. Endangered Species Act: An Econometric Analysis Using Matching Methods," *Journal of Environmental Economics and Management*, 54(3): 245-261.
- ** Andam, K., et al. 2008. "Measuring the Effectiveness of Protected Area Networks in Reducing Deforestation," *Proceedings of the National Academy of Sciences*, 105(42): 16089-16094.

March 14 and 16: No classes (Spring Break)

March 21 (Tue): Selection on Unobservables: Difference-in-Differences I

- Problem Set #3 distributed.
- MR, pp126-129; WB, Chapter 6; A&P, Chapter 5.

March 23 (Thrs): Selection on Unobservables: Difference-in-Differences II

- A&P, Chapter 5; KH, Chapter 14.

March 28 (Tue): Applications of Difference-in-Differences

- Reading Summary #4 Due.
- **DiTella, R., and E. Schargrodsky. 2005. "Do Police Reduce Crime? Estimates Using the Allocation of Police Forces after a Terrorist Attack," *American Economic Review*, 94(1): 115-133.

March 30 (Thr): Selection on Unobservables: Instrumental Variables I

- MR, pp129-130; A&P, Chapter 3; KH, Chapter 6.

April 4 (Tue): Selection on Unobservables: Instrumental Variables II

- A&P, Chapter 3; KH, Chapter 15.

April 6 (Thr): Demonstration of Selection on Observables: Diff-in-Diff and IV

- In-class demonstration.

April 11 (Tue): Applications of Instrumental Variables

- Reading Summary #5 Due.
- **Levitt, S.D. 2002. "Using Electoral Cycles in Police Hiring to Estimate the Effects of Police on Crime: Reply," *American Economic Review*, 92(4): 1244-1250.

April 13 (Thr): Selection on Unobservables: Regression Discontinuity I

- Problem Set #4 distributed.
- WB, Chapter 5; A&P, Chapter 4.

April 18 (Tue): Selection on Unobservables: Regression Discontinuity II

- KH, Chapter 16.

April 20 (Thr): Applications of Regression Discontinuity

- Reading Summary #6 Due.
- **Carpenter, C. and Dobkin, C. 2009. "The Effect of Alcohol Consumption on Mortality: Regression Discontinuity Evidence from the Minimum Drinking Age," *American Economic Journal: Applied Economics*, 1(1): 164-182.

April 25 (Tue): Review

April 27 (Thr): Review

- Final Exam distributed.

Student Code of Conduct
As with all members of the University community, the University requires students to conduct themselves honestly and responsibly, and to respect the rights of others. Conduct that unreasonably interferes with the learning environment or that violates the rights of others is prohibited by the standards and guidelines collectively described as the Student Code of Conduct. For more information, refer to Student Rights, Freedoms, and Responsibilities section in the *UAA Fact Finder/Student Handbook* http://www.uaa.alaska.edu/studentaffairs/fact-finder.cfm or Chapter 7 Academic Standards and Regulations in the UAA catalog http://www.uaa.alaska.edu/records/catalogs/catalogs.cfm.

Academic Honesty
Academic integrity is a basic principle, which requires that students take credit only for ideas and efforts that are their own. Cheating, plagiarism, and other forms of academic dishonesty are defined as the submission of materials in assignments, exams, or other academic work that is based on sources prohibited by the faculty member. Plagiarism in written work will result in a class grade of F. Plagiarism includes: (i) stealing or passing off the ideas or words of another as one's own, (ii) using another's production without crediting the source, and (iii) to present as new and original an idea derived from an existing source. In addition to any adverse academic action, which may result from engaging in academically dishonest behavior, the university specifically reserves the right to address and sanction the conduct involved through the student judicial review procedures outlined in the *UAA Fact Finder/Student Handbook*.

Additional information on plagiarism is located on the UAA Library website: http://www.consortiumlibrary.org/blogs/ahi/plagiarism/

Disability Support Services
Disability Support Services (DSS) coordinates academic support services for students who experience disabilities. To access support services, students should contact DSS and provide current disability documentation. Additional information may be accessed at the DSS Office in Rasmuson Hall (RH105) or on-line at www.uaa.alaska.edu/dss. Services include, but are not limited to, American Sign Language interpreters, note-taking assistance, testing adjustments, ergonomic furniture, textbooks in alternate formats (e.g., large print, audio, e-text, etc.), and access to adaptive technology. DSS also serves as a resource for the community, facilitating workshops and awareness-building events, and maintaining an extensive lending library.