MPA 816: Quantitative Program Evaluation

Winter 2018

Tuesday's 1:00 to 2:20 pm in **Room 448** (Robert Sutherland Hall)
Wednesdays 8:30 to 9:50 am in **Room 334** (Robert Sutherland Hall)

Instructor: Steven Lehrer   **Hours:** Monday and Wednesday 2:15 – 3:25pm
Office: Sutherland Hall 324   and by appointment
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Course Description: MPA 816 is an advanced level course which focuses on explaining important issues and topics in the design of empirical research. Policy makers create initiatives to try to affect their or others' housing, educational, health, environmental and myriad other circumstances. These initiatives are called "programs", such as anti-smoking, alcohol abuse and illegal drug treatment programs; programs to give money to poor people or to house homeless people; programs to combat air and water pollution, and so forth. An important premise of this course is that such programs ought to be studied to try to answer questions such as: Should a program be set up in the first place? What kind of program should that be? Whom or what should it target? How was implementation accomplished? Was the program implemented as designed? Did the program achieve what it was supposed to achieve? How did it do that, and what was the cost? Or why didn't it accomplish its objectives? And what unexpected benefits, harms or other consequences occurred? Or is the empirical analysis appropriately identifying the benefits?

These are the kinds of questions that program evaluation methods attempt to answer, and this course will introduce you to these methods. This course focuses on methods, on how you go about learning something. We are less interested in "answers" to these questions than in how you ask these questions and how you arrive at "answers". The course will build upon the knowledge and skills you gained in MPA 804 (Economics) and MPA 805 (Analytical/ Quantitative Analysis) or similar courses. Since the course will conduct a critical evaluation of research designs and policy-related research, skill building in critical thinking and problem solving will be emphasized.

Course Prerequisites: Students are expected to be comfortable with basic statistics and microeconomics at an introductory level. Students are expected to be under take regression analysis with a computer package such as Microsoft Excel or SPSS or Stata. If you have any questions about these requirements, please see me.

Website: Additional information, lecture outlines, links to readings, the calendar/reading list, and other useful information about this class can be found on onQ.

Objectives: After completing this course, you will be able to:
• Define program evaluation and discuss the various purposes of program evaluation and the various types of program evaluations
• Discuss the questions evaluators need to address to the stakeholders, often program managers and those responsible for funding the program and the program's clients.
• Relate the design of program evaluation to the questions stakeholders have about the program.
• Carry out a simple program evaluation.
• Summarize and interpret the data gathered for a program evaluation
• Present the data in a report (and know how such a report differs from a research paper).
•   Understand the purpose and objective of non-experimental evaluation
• Obtain information from the World Wide Web relevant to a program evaluation,
• Be able to discuss the differences between alternative empirical methods commonly used in applied research.

Required Readings: A reading list appears on the course calendar. A copy of all the readings listed on the tentative calendar in this syllabus has been placed on reserve at the library. You may be assigned additional readings dealing with topics covered in class**. Specifically assigned** supplementary readings are integral parts of the course, and therefore, exam questions dealing with those readings are **highly likely**.

As indicated on the tentative calendar readings have been assigned for each lecture period, and the material in these readings will be discussed in class. Please complete all readings prior to the class in which they will be discussed. The lectures will also cover material not included in the readings. To a large degree, the readings and lectures are not substitutes – they are chosen and designed to complement each other.

Textbook: Angrist, J. D. and Pischke, J.-S. (2014). Mastering' metrics: the path from cause to effect. Princeton University Press.

Supplementary Readings: You may be assigned additional readings in the form of articles dealing with topics covered in class**. Specifically assigned** supplementary readings are integral parts of the course, and therefore, exam questions dealing with those readings are **highly likely**.

Software: In order to complete the assignments in this course and several others in the MPA program, you will need to apply econometric software to data. You are required to have your own license to use Stata to do so. Stata Corp. offers student discounts on the purchase of Stata through what is called GradPlan and also has shorter term licenses available at a discount at https://www.stata.com/order/new/edu/gradplans/student-pricing/. The "GradPlan" has been established for Queen's and students could purchase Stata also online at the following link https://www.stata.com/order/new/edu/gradplans/campus-gradplan/.

The most recent release of Stata is version 15 and there are several different flavors of Stata: MP, SE, IC, Small. These different flavors vary by the number of variables and observations they are able to handle. I highly recommend that you buy at least Stata/IC since you will work with datasets that exceed the capabilities of Small Stata. To get maximum value from this class, it is expected that by the end of the third week you will have your own copy of Stata.

While the majority of MPA graduates do not conduct statistical analysis for a living, some knowledge of statistical software has been important in helping past students gain employment in both government agencies and the private sector. Note the University does not provide access to Stata in any of its general computer labs.

Grading: This course is designed to be very rigorous and demanding. You are expected to work hard, actively participate in class, ask questions when you have any doubts, and perform to the very best of your ability. Although the material is challenging, the purpose of this course is to teach you something about program evaluation, not to destroy your GPA.

Grading will follow QSPS guidelines. The course grade will be computed using the following weights

4 Homework Assignments	28%
Debate	22%
Final Exam	50%
Total	100%

Homework: Four times during the semester, I will assign several homework problems. Homework will be worth 28 percent of course grade. Late homework papers will be penalized 50 percent per day late. Group work on homework projects is not only acceptable it is strongly encouraged. If you work together in a group, all group members should contribute to the effort.

Debate: The performance during the debate will constitute your overall grade on this assignment. The debate is described below.

Exam: The final exam will be offered during the examination period. The final exam will be cumulative and account for 50 percent of the course grade. Missing the exam without advance notice will result in a zero grade. As well, evidence of the calamity must be provided.

Exam Policy: During the exam students are allowed to use calculators, rulers, pens, pencils and erasers. No other materials will be permitted without prior permission from the instructor.

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Quality of Work: Your homework papers and reports are expected to be neat and professional in appearance. Essays are expected to be legibly written (or typed), logically organized and grammatically correct. When working problems, you should show enough so that the steps you are following are clear.

If you need help: If you find that you are having difficulty with any of the material in this course:
(1) DO NOT let it build up. The material is very cumulative in nature and you are likely to find yourself only falling further behind.
(2) DO come and see me, either after class or by making an appointment. Be forewarned: I expect that you have read the appropriate sections of the textbook and reviewed your notes BEFORE you come to my office.

Attendance and Lateness: All students are expected to attend class regularly. Although attendance will not be taken each and every class, be warned that you are responsible for all material covered in class including that, which is not in the text. You are expected to make every effort to be on time to class. If for some reason you must be late, try not to disturb others while entering the classroom.

If you are unable to write the exam (i.e. if you are sick, personal issues, etc.), you must let me know BEFORE the exam time. If you cannot write the exam for some reason, do not sit down to write the exam. In the interest of fairness, you will be graded if you come into the exam room and see the exam. If you are attending a Queen's activity, you must provide me with notice at least two weeks prior to the exam date so that an equivalent make-up exam can be created.

Academic Integrity: Academic Integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities http://www.queensu.ca/secretariat/policies/senate/report-principlesand-priorities).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Graduate Studies Calendar (http://www.queensu.ca/calendars/sgsr/ Academic_Integrity_Policy.html). Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Disability Accommodations: Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Wellness Services (SWS) and register as early as possible. For more information, including important deadlines, please visit the Student Wellness website at: http://www.queensu.ca/studentwellness/ accessibility-services/

Teaching Style: There are many ways to learn. And different styles are more effective for some students than others. Therefore, we will utilize several different approaches: straight lectures, Powerpoint slides, problem sets, and exam preparation.

Accommodation after the fact: Once a student has written an exam or submitted an assignment, they may not subsequently be granted accommodation such as being offered a second opportunity to write the exam or assignment or have it count for less than originally specified in the course syllabus (reweighted). Students who cannot perform to the best of their abilities due a serious, extenuating circumstance must inform their instructor before attempting an exam or completing a course to arrange appropriate accommodation.

Receiving a grade below 70: In the event of receiving a final grade between 60 and 69.5 in this course, the School of Policy Studies will allow the student to write a qualifying examination to assess if the students' knowledge of this field meet the minimum standard for the respective degree. Passing the qualification exam will result in receiving a passing grade of B- for the course. The qualifying exam is not a make-up exam. The qualifying exam must be written by May 31, 2018.

Receiving a grade below 60 will result in a course failure. In this case, students will be required to either repeat the course or take an approved substitute. Note that The School of Graduate Studies regulations require students to have no more than one course failure.

Travel during exams: According to university regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods as well as during any scheduled class times. Requests to write a make-up exam because of conflicting travel plans (e.g. flight bookings) or requests to miss an in class exam due to other plans will NOT be considered except under extraordinary circumstances. Students are advised to wait until the final exam schedules are posted before making any travel arrangements.

Office Hours: The office hours are tentatively set for Monday, Wednesday 2:15-3:25pm. If you have a class conflict, please email me so that we can come up with another mutually convenient slot. Please internalize externalities and avoid unscheduled visits to my office.

References: In general, I am happy to provide references for employers or write letters of reference for students who plan to attend graduate school. The strength of my recommendation remains positively correlated with your performance in my course. For job references, please email me with a heads up that a potential employer might call or email. Please also let me know if there are any skills of yours that I should highlight in my reply to them. Naturally, make sure that these claims are credible as my reputation is on the line. If you would like a letter of reference for graduate school please place an addressed and stamped enveloped in my mailbox along with a short note explaining what the reference is for and when it is due. Also attach a statement of purpose (if relevant) as well as a current CV. Please allow 3 weeks for the completion of letters.

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THE DEBATE

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Overview The debates will be structured and formal, with the specific format described below. You should be well prepared with professional quality PowerPoint slides to make your points, if needed. You must be prepared to not only argue the merits of the evaluations in favor of your position, you must defend the evaluations you are supporting against criticism by the opponents and critique the evaluations that support your opponents' views. There will be a set of evaluations that will provide the core "pro" and "con" positions. While you are most likely to focus on these specific studies, you are free to draw on any additional research/evaluations that you think helps make your case.

Format for the debates
  Construction
♦ "Pro" team gives an 8-minute presentation of its position. The emphasis here is not so much on criticism of the other side as on explanation of the position it takes and why (the principles and arguments to which it appeals)
♦ "Con" team gives the same 8-minute presentation of its own position

♦ 3 minute break to allow teams to develop criticisms

Criticism & Rebuttal
♦ "Pro" team presents challenges to the view defended by the "con" team, for 4 minutes.
♦ "Con" team has 4 minutes to rebut the challenges, including time to strategize among themselves about their response
♦ "Con" team presents challenges to the view defended by the "pro" team, for 3 minutes.
♦ "Pro" team has 3 minutes to rebut the challenges, including time to strategize among themselves about their response
♦ The floor is opened to the rest of the class to present questions for either team, or both. This might last up to about 15 minutes, and the instructor has authority to moderate this discussion.

Summary
♦ "Pro" gives a 3 minute "state of the debate," summarizing why its position should be adopted
♦ "Con" gives a 3 minute "state of the debate," summarizing why its position should be adopted
♦ Floor votes on the policy.

Issues to keep in mind
♦The construction and criticism must be in PowerPoint format; you may also want to use PowerPoint for parts of the summary.
♦ The time schedule will be strictly enforced.
♦ Be polite, even if you feel strongly: for instance, (a) do not speak out of turn, (b) if you disagree with someone, never attack her/him, attack what s/he said/argued, etc.
♦ All arguments must focus on the quality of the research and analysis; other issues, such as political, moral, or ethical factors are not germane for this debate.
♦ Each team has four structured presentations; no team member should give more than one presentation.
 ♦ Confer closely during your preparatory time to avoid overlaps and to maximize coverage of the main aspects of the topic.

Suggested Strategies
1. State your case in a logically complete manner, stressing its significance.
2. Anticipate the arguments of the negative position and create responses to those arguments ahead of time.
3. Define the significant terms you use in making your case.
4. In your response, examine the negative side's evidence critically, for biases and weakness.
5. Evaluate the affirmative case for its weakest points and for its logical completeness and consistency.
6. Think of possible disadvantages of the affirmative's proposals, in terms of solving the problem and of feasibility.

General Considerations Your goal is persuasion, to convince your audience of the benefits of the position your team is taking.   Keep your composure, show good sportsmanship and respect for contrary arguments, and stay within allotted time limits. Make clear the meaning you ascribe to the major terms, concepts, and symbols in your argument. For all participants, an apparently spontaneous (and well practiced) delivery is superior to reading a manuscript.

Selection of Teams and Topics Once I have met with each student during the first 3 weeks of class, I will decide the topics of the debate, doing my best to match the topics with your specific interests. You will get to choose the topic – e.g., school choice, work first vs human capital investment, minimum wage increases –but then team members will be randomly assigned. We will make these decisions within the first 3 weeks of class so that you can begin working on the debates asap.

Tentative Calendar and Reading List
(Subject to Change)

Date	Topic	Assigned Reading
January 9	Course Introduction	
January 10	What is Evaluation?	Rossi et al Chapter 1
January 16	Program Theory	Rossi et al Chapter 5
January 17	Statistics Review	
January 23	Impact Analysis- Randomized Experiment	Angrist and Pischke Chapters 1 and 2
January 24	Case for and Against Randomized Experiment	Burtless (1995), Heckman & Smith (1995)
January 30	Research Design and Multiple Testing	Duflo (2006)
January 31	Field Experiments	Angrist, Lang and Oreopolous (2009), Gerber and Green (2000) Duflo and Saez (2003)
February 6	Placebo Effects and Context Effects	Malani (2006), Ding and Lehrer (2016)
February 7	Quasi Experimental Designs: Pre/Post Comparisons with No Comparison group	Dowdell et al. (1992), Knittel and Stango (2010), Lehrer and Lepage (2017)
February 13	Quasi Experimental Designs: Pre/Post with Comparison group	Angrist and Pischke Chapter 5, Blundell and Costa-Diaz (2008), Baker, Gruber and Milligan (2008)
February 14	Regression Discontinuity	Shadish, Cook &Campbell, Chapter 7, Chetty et al. (2009), Angrist and Pischke Chapter 4
February 27	Quasi Experimental Designs: Selection on Observables, Matching, Propensity Scores	Angrist and Pischke Chapter 2
February 28	Quasi Experimental Designs: Selection on Unobservables: Instrumental Variables	Angrist and Pischke Chapter 3 McClellan and Newhouse
March 6	Selection Correction Methods and Marginal Treatment Effects	Cobb-Clark &Crossley (2003), Heckman and Vytlacil (2007)
March 7	Natural Experiments, Fixed Effects and Panel Data	Angrist and Pischke Chapter 5 and 6.2
March 13	Non Parametric Bounds	Manski (2008)
March 14	Big Data Methods 1: Lasso and IV	Athey and Imbens (2017)
March 20	Big Data Methods 2: Double Estimators	Lehrer and Xie (2018)
March 21	Quantile Treatment Effects / Distributional Effects / Dynamic Treatments	Ding and Lehrer (2010), Kottelenberg and Lehrer (2017), Bitler, Gelbach and Hoynes (2006)
March 27	Qualitative Methods	Rossi et al, Chapter 6, Affholter, Chapter 5
March 28	Focus Groups for Process Evaluation	HRSDC: "Evaluation Tool Kit Focus Group"
April 4	Politics and Ethics of Evaluation	Weiss: Chapter 13
April 5	Catch Up and Final Review	
Week of April 12 or 19	Final Exam	Location and time to be determined

PARTIAL READING LIST
In the order they appear on the syllabus

Peter H. Rossi, Mark W. Lipsey and Howard E. Freeman (2004), Evaluation: A Systematic Approach, (7th Edition). London: Sage Publication. Chapter 1 [pp. 1-30]

Gary Burtless (1995), "The Case for Randomized Field Trials in Economic and Policy Research," The Journal of Economic Perspectives, vol. 9, No. 2. (Spring, 1995), pp. 63-84.

Heckman, J. & Smith, J. (1995) "Assessing the Case for Social Experiments" Journal of Economic Perspectives, vol. 9 (2), pp. 85-110.

Duflo, E. and E. Saez (2003), "The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment", Quarterly Journal of Economics 118(3), 815-842.

Duflo, E., R. Glennerster and M. Kremer (2007), "Using Randomization in Development Economics: A Toolkit", Centre for Economic Policy Research, Discussion Paper No. 6059.

Oreopoulos, P. & D. Lang & J. Angrist (2009) "Incentives and Services for College Achievement: Evidence from a Randomized Trial," American Economic Journal: Applied Economics, American Economic Association 1(1), 136-63.

Gerber, A. S. and D. P. Green (2000), "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment," The American Political Science Review 94(3), 653 - 663.

Malani, A. (2006), ""Identifying Placebo Effects with Data from Clinical Trials," Journal of Political Economy 114(2), pages 236-256,

Ding W. and S. F. Lehrer (2017), "Estimating Context-Independent Treatment Effects in Education Experiments", mimeo, Queen's University.

Thomas D. Dowdell, Duresh Govindaraj and Prem C. Jain (1992), "The Tylenol Incident, Ensuring Regulation, and Stock Prices." The Journal of Financial and Quantitative Analysis, vol. 27, pp. 283-301

Knittel, C. R. and V. Stango (2010). "Celebrity Endorsements, Firm Value and Reputation Risk: Evidence from the Tiger Woods Scandal" mimeo, UC Davis.

Posavac, E. and R. Carey (2003) Program Evaluation: Methods and Case Studies 6th edition, Englewood Cliff, NJ: Prentice Hall, , pp.174-188.

Treasury Board of Canada, Secretariat. (1998) Program Evaluation Methods: Measurement and Attribution of Program Results, Third Edition downloadable file: http://www.tbssct.gc.ca/eval/pubs/pub96_e.asp

Blundell, R. and M. Costa-Diaz (2009), "Alternative Approaches to Evaluation in Empirical Microeconomics," Journal of Human Resources 44(3), 565-640.

Michael Baker & Jonathan Gruber & Kevin Milligan, 2008. "Universal Child Care, Maternal Labor Supply, and Family Well-Being," Journal of Political Economy, University of Chicago Press, vol. 116(4), pages 709-745, 08.

Bruce D. Meyer (1995), "Natural and Quasi-experiments in Economics", Journal of Business and Economic Statistics vol. 13, Issue 2, pp. 151-61

Shadish, Cook and Campbell, "Experimental and Quasi-Experimental Design", Chapter 7 [207245]

Richard J. Marcantonio and Thomas D. Cook, "Convincing Quasi-Experiments: The Interrupted Time Series and Regression-Discontinuity Design", Handbook of Practical Program Evaluation, Chapter 7.

Chetty, R., A. Looney, and K. Kroft (2009), "Salience and Taxation: Theory and Evidence", American Economic Review 99(4) 1145-1177.

Angrist, J. D., and V. Lavy (1999), "Using Maimonides' Rule To Estimate The Effect Of Class Size On Scholastic Achievement," The Quarterly Journal of Economics 114(2) 533-575.

Joseph P. Newhouse and Mark McClellan (1998), "Econometrics in Outcomes Research: The Use of Instrumental Variables." Annual Review of Public Health, Vol. 19, pp.13-24

Steven D. Levitt (1997), "Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime," The American Economic Review, vol. 87 (Jun., 1997), pp. 270-290.

Lisa A. Gennetian, Johannes M. Bos and Pamela A. Morris (2002), "Using Instrumental Variables Analysis to Learn More from Social Policy Experiments." MDRC Working Papers on Research Methodology

Deborah A. Cobb-Clark and Thomas Crossley (2003), "Econometrics for Evaluations: An Introduction to Recent Developments," The Economic Record, vol. 79, pp. 491-511

Christopher Winship and Stephen L. Morgan "The Estimation of Causal Effects from Observational Data",

James J. Heckman & Vytlacil, Edward J., 2007. "Econometric Evaluation of Social Programs, Part I: Causal Models, Structural Models and Econometric Policy Evaluation," Handbook of Econometrics, in: J.J. Heckman & E.E. Leamer (ed.), Handbook of Econometrics, edition 1, volume 6, chapter 70 Elsevier.

James J. Heckman & Vytlacil, Edward J., 2007. "Econometric Evaluation of Social Programs, Part II: Using the Marginal Treatment Effect to Organize Alternative Econometric Estimators to Evaluate Social Programs, and to Forecast their Effects in New," Handbook of Econometrics, in: J.J. Heckman & E.E. Leamer (ed.), Handbook of Econometrics, edition 1, volume 6, chapter 71   Elsevier.

Debra J. Rog, "Constructing Natural 'Experiments'", Handbook of Practical Program Evaluation, Chapter 6

Fletcher, Jason M. & Lehrer, Steven F., 2011. "Genetic lotteries within families," Journal of Health Economics, Elsevier, vol. 30(4), pages 647-659,

Charles F. Manski, 2008. "Partial Prescriptions For Decisions With Partial Knowledge," NBER Working Papers 14396, National Bureau of Economic Research, Inc

Ding, W. and S. F. Lehrer (2010), ""Estimating Treatment Effects from Contaminated MultiPeriod Education Experiments: The Dynamic Impacts of Class Size Reductions", Review of Economics and Statistics 92(1), 31-42.

Kottelenberg, M. and S. F. Lehrer (2017), "Targeted or universal coverage? Assessing heterogeneity in the effects of universal childcare," *Journal of Labor Economics* Volume 35, Issue 3, July 2017, 609-653.

Bitler, M. P., J. B. Gelbach, and H. W. Hoynes (2006), "What Mean Impacts Miss: Distributional Effects of Welfare Reform Experiments", American Economic Review 96(), 988-1012.

HRSDC: Evaluation and Data Development Strategic Policy, HRDC (1999), "QuasiExperimental Evaluation", http://www11.hrdc-drhc.gc.ca/pls/edd/QEE.html   Dennis P. Affholter, "Outcome Monitoring", Handbook of Practical Program Evaluation, Chapter 5 [pp. 98-118]

Evaluation and Data Development Strategic Policy, HRDC (1999), "Evaluation Tool Kit Focus Group", http://www.hrdc-drhc.gc.ca/edd

Debra L. Dean, "How to use focus group", ", Handbook of Practical Program Evaluation, Chapter 14 [pp. 339-349]

Carol Weiss, "Wring the Report and Disseminating Result." Chapter 13 [pp. 294-319]

Frick, K. D., and P. M. Lantz. 1996. "Selection Bias in Prenatal Care Utilization: An Interdisciplinary Framework and Review of the Literature." Medical Care Research and Review 53 (4): 371-96.

Lantz, P. M., Stencil, D, Lippert, MT, Beversdorf, S, Jaros, L and Remington, PL (1995)   "Breast and cervical cancer screening in a low-income managed care sample: the efficacy of physician letters and phone calls", American Journal of Public Health, vol. 85, Issue 6 834-836