ECON 379: Program Evaluation for International Development

Department of Economics
Williams College
Spring 2021
(syllabus revised February 16, 2021)

1 Contact Information and Course Logistics

1.1 Instructor

Dr. Pamela Jakiela (email: `pamela.jakiela@williams.edu`)

1.2 Stata TA

Omar Ahmad (email: `oa1@williams.edu`)

Omar will be holding Stata help sessions during the first month of class (details on glow).

1.3 Course Meetings

Tuesdays, Thursdays from 11:30 PM to 12:45 PM (on zoom)

1.4 Course Website

Most of the material for this course is available on either glow or the course's public website, but assignments must be turned in via glow.

Public: `https://pjakiela.github.io/ECON379/`

Glow: `https://glow.williams.edu/courses/3117328`

1.5 Office Hours

Office hours will be held on Tuesdays from 2:00–3:00 PM and on Thursdays from 4:00–5:00 PM. The URL for office hours is available on glow.

If you have a conflict with my scheduled office hours, you can email me to set up an appointment for an alternative time. Please note that I am unable to meet (even virtually) in the evening or on weekends.

1.6 Communication

Email is the best — indeed the only — way to contact me (`pamela.jakiela@williams.edu`). Under normal circumstances, I will try to respond to course-related emails withing

two working days of receipt.[1] I am sometimes overwhelmed by the volume of email I receive; if I have not responded to you within two working days, please feel free to send me an email reminder.

2 What Is This Course About? Who Should Take It?

2.1 Course Description

This course provides an overview of modern microeconometric methods for program evaluation, with a focus on their application in international development. The course covers experimental and quasi-experimental approaches to impact evaluation, with a focus on practical applications.

2.2 Course Objectives

1. **Special course objective for Spring 2021:** our primary objective this semester is to get through the term while doing whatever we need to do to keep ourselves, our families and loved ones, and our communities as physically and mentally healthy as possible. This is a difficult time for all of us. Some members of our community are really struggling. Some of us may become ill, may have loved ones who become ill, may find themselves taking care of young children who are out of school, or may face other unforeseen challenges. Throughout the semester, my objective is to be as understanding as possible with those of you who are struggling inside or outside the (virtual) classroom — and I ask that you are equally understanding with me.

2. By the end of the course, students will have an understanding of the main experimental and quasi-experimental approaches to impact evaluation. Students will be able to explain the econometric theory underlying each approach, including the identification assumptions required for valid causal inference. Students will also feel comfortable implementing these approaches in Stata.

3. By the end of the course, students will also have a conceptual understanding of the process of implementing an impact evaluation: how to identify a viable research question, what data would be required to answer a given impact evaluation research question, what steps would be involved in the process of collecting the relevant data, and how to analyze the resulting data.

2.3 Prerequisites

Students enrolled in ECON 379 should have completed one empirical methods course (POEC 253 or ECON 255, 502, or 503) and one microeconomics or public economics course (ECON 504 or ECON 110). Some familiarity with Stata is assumed, as is an understanding

[1] So, if you send me an email on Tuesday at noon, I will try to respond by the end of the day on Thursday. I do not check my email on weekends. If you send me an email on Friday afternoon, I will respond to it by the end of the day on Tuesday.

of fundamental statistical concepts including expected values and linear regression. Students will be asked to complete a Baseline Knowledge Assessment during the first week, and those with insufficient statistical preparation may be asked to delay taking the course.

3 How This Course Works

The core content of ECON 379 is divided into approximately 18 modules. Each module is associated with a set of required readings, a lecture (either a pre-recorded video lecture or a synchronous lecture presented during class time, depending on the topic), and an empirical activity (typically involving Stata). Required readings and pre-recorded video lectures should be completed prior to each course meeting; you will be asked to answer a series of review questions associeted with each (in glow) prior to class. Synchronous class time will be used to present or review lecture content and to begin working through an empirical exercise. When lecture topics are covered in class (rather than through pre-recorded lectures), you will complete a short set of review/comprehension questions (on glow) immediately after class. Empirical exercises (which we start during class time) must be completed and submitted (via glow) after class.

Over the course of the semester, you will also complete three projects intended to build your applied research and program evaluation skills (discussed in more detail below). There are also two exams which take place during class time on April 1 and May 11.

4 Textbooks

There are two required textbooks:

- The World Bank's *Impact Evaluation in Practice* by Paul Gertler, Sebastian Martinez, Patrick Premand, Laura Rawlings, and Christel Vermeersch. We're using the second edition. It is available for free at: `https://openknowledge.worldbank.org/handle/10986/25030`. You can also order the pdf through Amazon if you prefer.
- *Running Randomized Evaluations* by Rachel Glennerster and Kudzai Takavarasha. This book is available (to Williams College students) for free via JSTOR: `https://www.jstor.org/stable/j.ctt4cgd52`. You can also order the book through Amazon if you prefer, though at the time of writing it was out of stock.

Mastering Metrics: The Path from Cause to Effect by Josh Angrist and Steve Pischke is another useful reference. It covers the material in *Impact Evaluation in Practice* at a higher level of technical sophistication. We'll use the first chapter, which is available for free online. If you like that chapter, you may wish to buy a copy of the book for reference.

We'll also be using a number of articles from peer-reviewed journals. These are typically available online through JSTOR, or from the authors' websites, or via google scholar. I'll provide links to articles on glow and (when permissions allow) the public website for the course.

5 Assignments and Grading

The anticipated average grade in this class is a B^+. Grades are calculated through an explicit formula; they may be curved up (for example, if I write an exam that turns out to be too challenging), but they will not be curved down.

Unless otherwise stated, all (unexcused) late assignments will be penalized: the maximum grade will be lowered by 10 percent for every day late for the first five days (including weekends). All assignments submitted more than five days late will receive half credit (less any reductions for incorrect responses).

Grades are calculated as follows:

Higher exam score	15 points
Lower exam score	5 points
Readings, lectures, and other course material	20 points
Empirical exercises	15 points
Individual project: empirical replication	10 points
Class project: survey experiment	10 points
Group project: pre-analysis plan and presentation	15 points
Surveys and other ungraded assignments	5 points
Class participation	5 points

5.1 Exams

There are two exams: the first on April 1 and the second on May 11. *If you have a conflict with either of these dates, you should discuss it with me during the first two weeks of class.* Exams take place during class time. The exams are open-book and open-notes, but you must not work together, seek help from anyone inside or outside the course, or provide help to any other students. The highest of your two exam scores will receive greater weight in your final grade. Your higher exam score accounts for 15 percent of your final grade, while your lower exam score counts for five percent of your final grade.

5.2 Readings, Lectures, and Other Course Material

Reading assignments and pre-recorded video lectures (and occasionally other assignments) will be posted on glow. To earn credit for each assignment, you must complete the associated comprehension questions on glow prior to the assignment deadline. Reading and video assignments must be completed prior to the class period they are associated with. Some

modules will also include in-class lectures or discussions, each of which will be linked to a short set of review questions that must be completed after class (on glow). Your scores from the glow quizzes associated with readings and lectures account for 20 percent of your final grade.

5.3 Empirical Exercises

We will begin an empirical exercise (typically involving Stata) during each class period. These assignments must be completed after class, and you must submit your responses via glow before the next class period. Your are encouraged to work together on these activities. Solutions will be posted on glow after everyone completes the assignment. Scores on the empirical exercises account for 15 percent of your final grade.

5.4 Class Projects

You will complete three projects over the course of the semester. The first is an **independent project**: you will replicate the main results table from a program evaluation study that has been published in an academic journal. The second is a **class project**: we will work together to conduct a survey experiment and analyze the results. The third is a **group project**: you and a partner will prepare a pre-analysis plan for an impact evaluation and present your design to the class. Additional details about all three projects will be provided over the course of the semester. The individual and class projects each account for 10 percent of your final grade, while the group project accounts for 15 percent of your final grade.

5.5 Surveys and Other Ungraded Assignments

Over the course of the semester, you will be asked to complete a number of ungraded surveys (for example, a baseline knowledge assessment and weekly wellbeing check-in surveys). These contribute to your final grade in that you earn credit for completing these activities on time.

The most important ungraded survey is the Weekly Wellbeing Survey. These surveys are used to check-in on your overall wellbeing and your level of comfort with the course material each week. *This may be a challenging semester for some of us. Please alert me as soon as possible if you feel overwhelmed or need special accommodation to manage your coursework and other responsibilities.*

5.6 Class Participation

Students are expected to attend class and participate in in-class activities including discussions. Class participation accounts for 5 percent of the final grade.

I do not expect students to have perfect attendance: if you need to miss class once or twice during the semester, you do not need to seek approval from me in advance (though you are welcome to alert me if you wish). If you expect to miss more than two or three classes,

or you encounter challenges that prevent you from attending class consistently, you should discuss these issues with me in office hours or over email. Regular absences will result in a loss of class participation credit unless they are discussed with and approved by me in a timely manner.

Attendance alone is not sufficient to earn full credit for class participation. You are expected to contribute to class discussions and participate in in-class activities in a thoughtful and respectful manner. *I do not expect that you will always know the correct answer when I call on you!* Indeed, one of the best ways to learn is through trial and error, with an emphasis on the error. However, I expect you to engage with course content in a way that reflects both preparation and genuine effort.

You should arrive at our synchronous class meetings prepared to discuss the readings and pre-recorded video lectures. Specifically, you should come ready to answer each of the following questions:

1. What were the main points or takeaways from the reading/lecture?
2. What was one thing that struck you as surprising or particularly interesting?
3. What was one thing that you would like to discuss more, either because you weren't sure that you agreed with the author or because you might not have understood what the author (or your professor) was trying to get across?

You should also come to class ready to work in Stata 16 (which is available for free form OIT) — which means that you should be at a computer in a fixed location during class time whenever possible. In some cases, it will be helpful if you are willing to share your screen (specifically, the Stata window) with the class or some of your classmates. If you would prefer not to do this, please communicate your preference to me over email or through your weekly wellbeing survey.

6 Schedule of Topics and Important Dates

The schedule below is approximate, and may be updated as we progress through the semester. Additional details on assignments and due dates are available on glow.

The exams take place during class time on April 1 and May 11. *If you have a foreseeable conflict with either of those dates, you must discuss your options with me before March 2.*

There is no class on March 23 (reading period) or April 22 (health days).

Dates	Description
Introduction to the Course	
2/17	Organizational Meeting
2/23	Module 1: Why Evaluate?
Part I. Identification Strategies	
2/25	Module 2: Selection Bias and the Experimental Ideal
3/2	Module 3: False Counterfactuals
3/4	Module 4: Difference-in-Differences, Part 1 (DD1)
3/9	Module 5: Diff-in-Diff in a Regression Framework (DD2)
3/11	Module 6: Two-Way Fixed Effects (DD3)
3/16	Module 7: Treatment-on-the-Treated (IV1)
3/18	Module 8: Instrumental Variables in the Wild (IV2)
3/23	*Reading period: no classes*
3/25	Module 9: Regression Discontinuity (RD1)
3/30	Module 10: RD as IV (RD2)
4/1	*Exam 1 (during regular class time)*
Part II. Program Evaluation in Practice	
4/6	Module 11: Power Calculations
4/8	Module 12: Random Assignment in Practice
4/13	Module 13: Compliance and Attrition
4/15	Module 14: Survey Design
4/20	Module 15: Adventures in Data Collection
4/22	*Health days: no classes*
Part III. Galaxy Brain	
4/27	Module 16: Pre-Analysis Plans
4/29	Module 17: The Replication Crisis
5/4	Module 18: Criticisms of RCTs
5/6	Module 19: Meta-Analysis
5/11	*Exam 2 (during regular class time)*
5/13	*Student presentations*
5/18	*Student presentations*

7 Honor Code

All exams and assignments are open book and open notes, and you are free to use calculators at any time. You are not allowed to work together, ask for or accept help from another student or from anyone outside the course, or assist any other student on exams. Collaborating on exams is a violation of the honor code. You are free to discuss all other course-related activities and assignments with other students in the class.

On the individual project: you may discuss your work with other students, but you should not share your code or write-up with anyone, and you should not look at anyone else's code or write-up. If two students submit identical work, neither will receive credit.

When you complete the glow quizzes associated with readings and lectures, you will be asked to answer multiple choice and true/false questions. When you enter your answers to the empirical exercises into glow, you will asked to provide numeric responses. In both cases, you should not ask another student to provide you with the answers to these questions, nor should you provide the answers to the questions to any other student — but you are free to discuss the questions with other students, and to collaborate on the empirical exercises.

The class and group projects are collaborative activities, and you are encouraged to work together (with those in your group). You should not present work produced by individuals outside this class as your own work. If, at any point, you are unsure about how to appropriately cite others' work, please discuss this with me during office hours or over email.

8 Tutoring through the Peer Academic Support Network

As a Williams student, you can use the free tutoring services provided by the Peer Academic Support Network. A schedule showing available individual tutoring sessions for this class, as well as staffing in the Math and Science Resource Center (MSRC) or Economics Resource Center (ERC), is available through the Williams College TutorTrac system. TutorTrac will be updated weekly. In addition, you can access the Peer Academic Support Network Slack Workspace with a Williams email address to use your course channel d to ask a question to the group OR to find out if there is a tutor available at that time to answer your question through Direct Messaging. Although drop-in contact will start in the Slack workspace, you and your tutor are welcome to share a Jamboard and/or move to talking by video chat or phone.

Step-by-step instructions for finding and scheduling tutoring sessions are on the Peer Academic Support Network webpage. If you have questions about tutoring at Williams, please email `msrc@williams.edu`.

9 Health and Accessibility Resources

Students with disabilities of any kind who may need accommodations for this course are encouraged to contact Dr. G. L. Wallace (Director of Accessible Education) at 597-4672. Students experiencing mental or physical health challenges that are significantly affecting their academic work or well-being are encouraged to contact me and to speak with a dean so we can help you find the right resources. The deans can be reached at 597-4171.

10 Classroom Culture

The Williams community embraces diversity of age, background, beliefs, ethnicity, gender, gender identity, gender expression, national origin, religious affiliation, sexual orientation, and other visible and non visible categories. I welcome all students in this course and expect that all students contribute to a respectful, welcoming and inclusive environment. If you have any concerns about classroom climate, please come to me to share your concern.

11 How Long Is This Syllabus? This One Goes to Eleven

Congratulations on making it to the end of the syllabus. Do professors enjoy writing syllabi? Not really. Do students enjoy reading them? Probably not. Hopefully, this document will provide us with a shared set of expectations for the semester, making the course more constructive and enjoyable for everyone. Also, if you send me an email containing a picture of an elephant before February 26, you will earn an extra point of class participation credit.