



**NYU**

**ROBERT F. WAGNER GRADUATE  
SCHOOL OF PUBLIC SERVICE**

# **PADM-GP 2875**

## **Estimating Impacts in Policy Research**

### **Instructor Information**

- Professor Jan Blustein
- Email: [jan.blustein@nyu.edu](mailto:jan.blustein@nyu.edu)
- Office Hours: on Zoom – link on our Classes site

### **Course Information**

- Class Meeting Times: Tuesdays, 2/2 – 5/4, 6:45 pm – 8:25 pm
- Class Location: Online – see links on Classes site Zoom tab

### **Course Prerequisites**

Prior coursework:

1. Statistical Data Analysis: Multiple Regression (PADM-GP 2902)
2. Program Analysis and Evaluation (PADM-GP 2171) or instructor's permission

Skill prerequisites. Stata is used in this course, and I will assume that you are familiar with basic data analysis using that package. If you are not, see the suggestions posted under the “Getting Started” section of our Classes site. I will also assume that you are capable with algebra at the pre-calculus level, are comfortable with algebraic notation, and understand the concept of a function.

## Course and Learning Objectives

This advanced course is offered for students who want to work as policy analysts in the not-for-profit or governmental sectors.

Your goals in this course should be to:

1. extend your familiarity with methodologic issues in policy research, including sampling, study designs, analytic approaches, and ethical matters.
2. get hands-on experience in analyzing and presenting data, including managing datasets, selecting appropriate analyses, interpreting computer output, and presenting your findings in writing and tables.
3. improve your skills in reading, understanding, and reporting on journal articles. You'll learn to interpret tables and findings and weigh the strengths and weaknesses of research reports.
4. enrich your professional vocabulary, drawing from the language of program evaluation, econometrics and epidemiology.

In other words, you should aim to become more confident and competent with the skills that are required of junior policy analysts.

## Textbook

We will use **Angrist and Pischke's Mastering Metrics** (Princeton University Press, 2015); hereinafter, MM. Other course readings will be available electronically through the Bobst library, via our Classes site.

## Stata

You will need access to Stata during class time and outside of class: 3 of our assignments use it, and we will have 2 or 3 "labs" during our weekly online class using Stata. Information on buying/accessing Stata can be found on our Classes site.

## Class website

This is managed via NYU Classes. The site houses a number of resources, including our syllabus, PowerPoints for each lecture, videos, assignments, datasets, article links and other core course documents. NYU Classes will be used to broadcast urgent matters such as assignment changes or glitches, class cancellations, and changes in office hours.

## Class Policies

### Keeping up/missed classes

This course moves quickly. There is a lot of work— most students spend many hours each week on the course. There is a fair bit of informal in-class give-and-take. Students who miss a class should consult a partner student and view the recorded lectures.

### Preparing for class

So that we can use class time efficiently, I will provide resources (articles, videos) for review before class. I'll also post pre class non-graded assignments based on those resources. You should complete the assignments, save them as .pdfs and upload them in the Assignments section of Classes at least ½ hour before class begins. The Assignments portal will close then. As you know, the Classes Assignment portal can be buggy at times, and so you should allow extra time to upload. Please do not email late assignments to me – I can't accept them.

I assume that you will come prepared for class and ready to contribute to this advanced class. I sometimes cold call on students, as is done in law schools.

### During class: Zoom etiquette, Miro boards

Please review the Wagner School expectations re: Zoom [here](#). Seeing faces helps me to monitor whether members of the group are understanding the lecture. I will expect you to have your camera on unless you have a reason not to. Send me a note in the Chat if you must keep your video off. When you have questions, please speak up --- I won't feel interrupted. If you prefer, you may put a question into the Chat --- but be mindful that it may be difficult for me to monitor the Chat while I'm speaking and showing slides.

Most classes will include a few breakout groups to test and consolidate your understanding of the lecture content. You'll work on these in-class exercises in teams, using a Miro virtual whiteboard to share resources. After each breakout we'll return and discuss answers as a class. Solutions to in-class exercises are posted online after each class.

### Getting help with assignments out of class.

Most of the class assignments use Stata, and students often have questions. If/when you do, you can ask me, either during office hours or via email. I'm happy to take email questions at any time. I can respond efficiently if you ask your questions clearly, attaching as a Word, or .pdf any output, tables, etc. Please don't send .smcl files, or anything that I can't read on my phone. Please always attach the relevant assignment sheet, so that I have it on hand to see what you're working on – this saves me going to the course website.

Other options for getting Stata help are:

- (a) through the consultants at NYU Quantitative Data Services at Bobst or
- (b) asking a fellow student.

You're welcome to work together on assignments, though each of you must do your own Stata runs (create your own code) and write your own papers.

## A note on journal articles

Articles used in the course are taken from journals representing an array of sectors and disciplines. There is great variation in emphasis, presentation, and statistical approaches. Some articles are dense and complex and may take hours to digest. You should keep at it, because reading journal articles is a skill that you can only learn by doing. I have tried to select papers that are accessible and not excessively technical. In some cases, these are oldies-but-goodies. Don't worry that the research findings may be obsolete. Your goal is to learn to read and think critically.

During class, we will discuss some of the articles in depth. Other articles will only be mentioned in passing. For the final exam, you will be expected to understand the gist of all articles.

## Grading

Course grades will be based on:

1. Assignment 1: (15%) – Medicare costs and supplemental insurance
2. Assignment 2: (5%) – Estimating impacts with dichotomous data
3. Assignment 3: (15%) – High school mentoring program
4. Assignment 4: (15%) – Program to decrease school suspensions
5. Final Exam: (30%)
6. Class preparation and participation: (20%)  
This includes your readiness with and completion of non-graded assignments

I will follow the [Wagner School policy on incomplete grades](#).

## Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by [Wagner's Academic Code](#). All Wagner students have already read and signed the [Wagner Academic Oath](#). Plagiarism of any form will not be tolerated. If you are unsure about what is expected of you and how to abide by the academic code, please ask.

## Course Overview

What follows is an outline of the topics that we'll be covering in each class, along with the dates for submitting assignments and taking the final exam. Information about class videos, readings and other resources are on our Classes site.

### Class 1: 2/2 - A framework for estimating impacts

- Goals of the course, course mechanics
- Impacts, outcomes and the counterfactual
- Review of estimation concepts with extension to the regression framework

### Class 2: 2/9 - Validity in social research

- What is validity?
- Internal validity, external validity, validity in measurement, conclusion validity (aka "statistical power")
- In-class exercise on statistical power

### Class 3: 2/16 - "Holding constant," "controlling for," "conditioning on observables"

- What does it mean to hold constant?
- Discussion of strategies beyond regression: matching, stratification, propensity scoring

### Class 4: 2/23 - In-class lab

- Preparation for Assignment 1

### Class 5: 3/2 - Dichotomous outcomes, non-linear functions & heterogeneous treatment effects.

- Clarifying "non-linearity"
- The linear probability, logit and probit models
- In-class exercises using the models; preparation for Assignment 2

### Class 6: 3/9 - Heterogeneous treatment effects, continued: coding using interaction terms

- In-class exercises with interactions: Preparation for Assignment 3

ASSIGNMENTS 1 & 2 due

### Class 7: 3/16 – Difference-in-differences

- Logic of D-in-D
- Assumptions, strengths, limitations of the D-in-D strategy
- In-class exercise with D-in-D

### Class 8: 3/23 –Panel data 1 (Theory)

- The logic of panel data analysis
- True panels versus pooled cross sections
- Two period panel data, multi-period panels
- Method of first differences
- Fixed effects estimation
- Assumptions, strengths, limitations of the panel data strategy

### Class 9: 3/30 – Panel data 2 (Practice)

- Review of characteristics of panel data
- Time fixed effects
- In-class lab with preparation for Assignment 4

### ASSIGNMENT 3 DUE

### Class 10: 4/6 – Regression Discontinuity (RD)

- The RD paradigm: examining the data, analyzing the data
- Assumptions and consequences of violations of the assumptions
- Interpretation of estimates
- Strengths and limitations of the RD strategy

### Class 11: 4/13 – Instrumental Variables

- The IV paradigm
- Assumptions and consequences of violations of assumptions
- Interpretation of estimates
- Strengths and limitations of the IV strategy

### Class 12: 4/20 - Randomized experiments

- Review of the logic of random assignment
- Residual threats to validity for experiments
- Applying the IV approach to get impact estimates beyond ITT

Class 13: 4/27 – Wrap-up and review

Class 14: 5/4 – Exam during class period

ASSIGNMENT 4 DUE

## **Henry and Lucy Moses Center for Students with Disabilities at NYU**

Academic accommodations are available for students with disabilities. Please visit the [Moses Center for Students with Disabilities \(CSD\) website](#) and click on the Reasonable Accommodations and How to Register tab or call or email CSD at (212-998-4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu)) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

## **NYU's Calendar Policy on Religious Holidays**

[NYU's Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.