Pamela Giustinelli
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SYLLABUS
First Year Ph.D., Econometrics 2

a   Instructors

- Main instructor: Pamela Giustinelli
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  - physical office: 5-E1-14 (Röntgen)
  - office hours: by appointment

- Teaching assistant: Martin Fankhauser
  - e-mail: martin.fankhauser@phd.unibocconi.it (or martin.fankhauser@unibocconi.it)
  - physical office: 5-E3-FM01 (Röntgen)
  - office hours: by appointment

b   Timetable and Grading

This is a six-week course in Microeconometrics. Each week will feature two lectures by Giustinelli and one TA session by Fankhauser. The course will begin on February 1, 2024.

A list of topics covered by the lectures is provided below. The TA sessions will include code-&-data applications, review of material for/from the lectures, and problem set solutions.

The final grade will be determined on the basis of three problem sets (10% each, total 30%) and a final exam (70%). If you fail to hand in one or more problem sets, the corresponding portion of the grade will be determined by the outcome of the final exam.

You are welcome to work on the problem sets in groups; however, each student should hand in their own copy. When you submit a problem set, please indicate the names of the other students with whom you worked. Each student is expected to work on the final exam individually.

c   Content

1. Intro to and Concepts in Microeconometrics (weeks 1-2)
   (a) Intro to Microeconometrics
       - Definitions; distinctive features; some history
   (b) Methodological Frameworks
       - Background concepts in econometrics (structure/model, exogeneity, counterfactual)
   (c) Identification Concepts
       - Identification vs. statistical inference; point vs. partial identification
   (d) Regression
       - Topics in conditional prediction with random and non-random samples (loss functions, extrapolation, parametric vs. nonparametric models, sampling processes)
   (e) Microeconomic data structures
       - Types of data; data sources

2. Core Methods (weeks 3-4)
   (a) Introduction to duration analysis

3. Design-Based Methods for Causal Inference (weeks 4/5-6)
   (a) Potential outcomes framework (POF)
   (b) Potential outcomes meet regression

(c) Selection on observables

(d) Selection on unobservables, including "traditional" instrumental variables (IV) and differences in differences (DID)

(e) POF with imperfect compliance, including instrumental variables as "quasi-experiments" (LATE IV)

(f) Regression discontinuity designs (RDD)

NOTE: This is a tentative schedule, the content or order of presentation might vary slightly depending on the pace of lectures and other organizational aspects.

d   Useful Textbook References

- Cameron, A.C. and P.K. Trivedi (2005), Microeconometrics. Methods and Applications, Cambridge University Press [OR/AND Wooldridge, J.M. (2002, 2010), Econometric Analysis of Cross Section and Panel Data, MIT Press].
- Manski, C.F. (2007), Identification for Prediction and Decision, Harvard University Press [OR/AND Manski, C.F. (1995), Identification Problems in the Social Sciences, Harvard University Press].
- Cunningham, S. (2021), Causal Inference: The Mixtape, Causal Inference: The Mixtape, Yale University Press.
- Angrist, J.D. and J.-S. Pischke (2009), Mostly Harmless Econometrics, Princeton University Press.

NOTE: Additional references to specific papers/handbook chapters and/or other support material will be provided during the course.