

Ph.D. program in Public Policy and Administration

Experimental Research for Evaluation (FIRST PART)

Marco Bonetti, Bocconi University

2018/19

The duration of the course for this year will be 12 classroom hours, as Alex Vespignani will be teaching a separate second part. This part of the course aims at developing the principles and methods of the design, conduct, and analysis of randomized controlled studies.

Topics that will be discussed will be:

1. Randomization methods (simple, constrained, adaptive)
2. Intro to survival analysis
3. Study design and analysis (protocol)
4. Sample size determination
5. Human subjects protection

References will be provided during the course. Electronic class notes will be made available after the lectures. Stata will be used for parts of the course.

A combination of one assignment (30% of the grade) and a final written exam (70% of the grade) will determine the final grade.

The course is meant for the PhD program in *Public Policy and Administration*. Students from other PhD programs may also take the course.

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Ph.D. program in Public Policy and Administration
Experimental Research for Evaluation
(SECOND PART)
Alessandro Vespignani, Northeastern University
2018/19

This part of the class will be devoted to an introduction network and digital data streams for the modeling of complex public health systems.

The topics that will be discussed will be the following:

1. Networks & Data
2. Novel data streams
3. Dynamical process modeling
4. Data-driven models in public health

References will be provided in class. It is planned a session with hands-on exercise with the computational platform [Gleamviz.org](https://gleamviz.org).

The grading on this part of the course will be based on a final take home assignment.