

40013 – EMPIRICAL RESEARCH FOR LAW

Course responsible and instructor: Prof. Giovanni Fattore

Course objectives

After the completion of this course you are expected to be familiar with basic concepts of statistics and empirical research design. You are also expected to improve your presentations skills. Finally, you will learn how to read an empirical paper and understand its main content.

Teaching methods

We will strongly rely on electronic material, including videos and tests. I will integrate this material with Q&A sessions and discussions.. . I expect interaction.

Grading Policy

Course grades are determined as follows, based on a maximum possible 100 points.

A final exam that will consist of multiple-choice, true/false, or short answer questions drawn from course readings, video and lectures (Maximum 50 points).

Evaluation of the presentation. Each of you will be assign a paper to present, in front of the class. (Maximum 20 points).

Tests and other assignments. These will not be graded but points will be taken out in case they are not completed (20 points if all assignments are completed)

Attendance and participation – Lack of attendance and participation may result in up to 10 points being deducted from your final grade (10 points possible).

Final course grades will be letter grade based on total accumulated points as follows:

97 > = A+
93 – 96 = A
90 – 92 = A-
87 – 89 = B+
83 – 86 = B
80 – 82 = B-
77 – 79 = C+
73 – 76 = C
70 – 72 = C-
< 72 = F (fail)

Readings

We use two books.

<http://onlinestatbook.com/2/index.html> (it is a free online book)

Finkelstein Michael O. Basics Concepts of Probability and Statistics in the Law. Springer 2009.

The online book (and especially its videos) are essential. The Finkelstein book helps you to use statistics and probabilistic reasoning in the Law. Unfortunately, it is very much US focused.

Chapters, videos and additional readings for each class are listed in the detailed syllabus. The Finkelstein book can be purchased through Amazon or other platforms. The readings are available through the Bocconi Library. The few that are not are available in Blackboard.

Blackboard

Please learn how to access to Blackboard and to work with its basic functions. I will use it to communicate, posting material and other activities.

DETAILED SYLLABUS

TOPICS	READINGS/VIDEOS
1. Introduction to Data Analysis and Descriptive Statistics <ul style="list-style-type: none"> Types of variables Percentiles Mean, median and mode Frequency Distribution Variability 	http://onlinestatbook.com/2/index.html Chapter I (4,5,11,11), II (2,3), III(4,13), IV (2) Finkelstein Chapter 2
2. Probability and Bayes' Theorem <ul style="list-style-type: none"> Concept of probability Notation and properties Bayes' theorem Sensibility and specificity of tests Prosecutor's fallacy Students' Presentation (two students)	http://onlinestatbook.com/2/index.html Chapters V (2,3) Finkelstein Chapter 1 and 3 Thompson WC and Schumann EL. Interpretation of Statistical Evidence in Criminal Trials 1987; 11(3): 167-187. Felton N. Improve Statistics in Court. Nature 2011; 479: 36-37.
3. Inferential statistics <ul style="list-style-type: none"> Normal distributions Standard Normal Distribution Normal Distribution Table Confidence intervals Hypothesis test Students' Presentation 2	http://onlinestatbook.com/2/index.html Chapter VII (2,4), XI (2,3,4) Finkelstein Chapter 4 and 5. Case A, Deaton A. Rising Morbidity and Mortality in Midlife among White non-Hispanic Americans in the 21 st Century. Proceedings of the National Academy of Sciences Dec 2015, 112 (49) 15078-15083; DOI: 10.1073/pnas.151839311
4. Hypothesis testing and Regression Analysis <ul style="list-style-type: none"> Hypothesis test Basics of Linear Regression Multiple Regressions Predictions 	http://onlinestatbook.com/2/index.html Finklestein Chapter 11. Giovanni Fattore, Donato Iacovone & Ileana Steccolini (2018) 'Managing successful change in the public sector': a view from the consultants' world, Public Management

5. The experimental Approach

- The counterfactual model
- The role of randomization
- Pros and cons of experimental methods
- Natural experiments

Wang Y, Fattore G. The impact of the great economic crisis on mental health care in Italy. *Eur J Health Econ.* 2020 Nov;21(8):1259-1272. doi: 10.1007/s10198-020-01204-w.

Students' presentation 4

6. Regression discontinuity designs

- Intuition
- The basic formula
- Fuzzy discontinuity Design

Banerjee AV, Duflo E., Glennerster R, Kothari D. Improving immunization coverage in rural India: clustered randomized controlled evaluation of immunization campaigns with and without incentives. *British Medical Journal* 2010; 340.

Students' presentation 5 & 6

Bertrand M, Sendhil M. Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination. *American Economic Review* 2004; 94(4): 991-1013.

7. Difference-in-differences

- Basic intuition
- Graphical representation
- Formulas

Pinotti P. Clicking on Heaven's Door: The Effect of Immigrant Legalization on Crime. *American Economic Review* 2007; 107(1): 138-68.

Students' presentation 7

8. Systematic-Reviews and Meta-analysis

Students' presentation 8

Beltrunaite, A., Bello, P., Casarico, A., & Profeta, P. (2014). Gender quotas and the quality of politicians. *Journal of Public Economics*, 118, 62-74.

Koehler JA, Loset F, Akoensi TD, Humphreys DK. A systematic review and meta-analysis on the effects of young offenders programs in Europe. *Journal of experimental Criminology* 2013; 9: 19-43.
