

## Syllabus

[cmcd.economia@fgv.br]

**Course: Statistics**

**2025**

### PROGRAM

- 1) Probability Theory
- 2) Random Variables, Expectations & Moments
- 3) Multiple Random Variables
- 4) Parametric Distributions
- 5) Sampling, statistics, and estimators
- 6) Asymptotics, Law of Large Numbers & Central Limit Theorem
- 7) Estimation methods (intro to OLS, Maximum Likelihood Estimation, Method of Moments, Extremum Estimators)
- 8) Hypothesis Testing & Confidence Intervals

### BIBLIOGRAPHY

There are two references that you can follow, Bruce Hansen “Probability and Statistics for Economists”, and/or Casella G. and Berger R “Statistical Inference”.

The study guide will tell you which sections of each of those books you should study. These two books vary in style, and you may choose whichever works better for you (or, ideally, look at both to better fix the material).

### GRADING

30% Problem sets  
70% Final Exam

The final grade in statistics will compose 20% of the final grade in Econometrics I

### PROFESSOR - EMAILS