



Research  
Education  
Outreach

**CCA**

Allievi Program, Master in Economics, and Ph.D. in Economics

# INTRODUCTORY STATISTICS

## Fall 2021

Instructor: Lorien Sabatino

### Contact Information

Politecnico di Torino (DIGEP)

lorien.sabatino@carloalberto.org

<https://sites.google.com/carloalberto.org/lorien-sabatino>

Office Hours: Send me an email and we set up an appointment

### Course Description

The course provides a formal introduction to some basic concepts of probability and statistics which are useful in economics and social sciences.

### Exam

There will be a written exam at the end of the course.

### Textbooks

Introduction to the Theory of Statistics - Mood, Graybill, and Boes

Introductory Statistics - Wonnacott and Wonnacott

## Program

- **Part 1**

- Introduction to set theory
- Introduction to probability
- Random variables
- Expectation and moment
- Some families of univariate discrete distributions
- Some families of univariate continuous distributions
- Multivariate random variables
- Conditional Probability and Independence

- **Part 2**

- Sampling
- Sample moments
- Weak law of large numbers
- Central limit theorem
- Point Estimation
- Consistency of estimators
- Hypothesis testing and confidence interval