

15D019

Economic Methods for Data Science

First Term

Overview and Objectives

In many real-world situations, data is incorrectly interpreted when ignoring the underlying economic or business setting. This course introduces a number of common mistakes when aiming to estimate causal effects. After explaining these mistakes using economic concepts, it provides a variety of empirical methods to overcome them. It further hints on how combining empirical methods together with an economic modelling structure allows to extract more information out of conventional data.

Prerequisite reading

This course has no prerequisite readings, but it requires being very knowledgeable about the content of the Economics Brush-up.

Course Outline

Lucas' Critique, Causality vs Correlation, Selection Problems, Instrumental Variable Estimation, Difference-in-Difference Estimation, Optimal Firm Pricing, Empirical Methods of Product Differentiation, Quantitative Marketing.

Required Activities

Standard attendance to theory lectures.

Evaluation

Exam at the end of the course plus some evaluation during the course.