UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Construction of Socio-economic Scenarios

2122-1-F6302N016-F6302N017M

Learning objectives

The course provides students with a core set of statistical and econometric tools for social science applied research.

At the end of the course, participants should be able to understand critical points of scientific empirical articles and start performing their own analysis using the tools illustrated. The emphasis will be on the practical implementation of each approach.

KNOWLEDGE AND UNDERSTANDING

Capacity to define a relevant research question.
Capacity to derive a relevant statistical or econometric model.
Capacity to understand the difference between different econometric methods.

Capacity to apply those tools to economic data.
Capacity to interpret results and express a critical view on them.

APPLYING KNOWLEDGE AND UNDERSTANDING

At the end of the course student will be able to...

- Formulate a relevant research question.
- Devise a strategy to investigate this question with data.
- Apply the relevant method to answer a particular question.
- Master basic econometric and data handling commands in excel and stata.
- Present the research output in a clear way.

- Offer critical views on research produced by others.

Contents

Topics to be covered:

- Simple statistical tools

- Introduction to simple linear regression.

-Introduction to simple causal inference.

Detailed program

Topics:

1) Statistical tools:

- collection and organization of information, archives, and tabulations;
- processing of individual data: univariate and bivariate descriptive statistics;

2) Econometric tools:

- Linear regression with one regressor .
- Linear regression with multiple regressors.

3) Introduction to Impact Evaluation:

- Basic Approach to Identification: Randomized Trials
- Quasi-experimental methods: ITT and Difference-in-Differences

Prerequisites

Participation to the course requires basic background in statistics and econometrics.

Teaching methods

- Face-to-face lectures
- Online lectures
- Exercises in lab (exercises, database, software etc.)
- Group assignments
- Interactive class activities (role playing, gaming to learn, simulation, online forum, instant polls)

Assessment methods

Students will be graded based on the performance during the course (assignments and mini-tests) and at the final written exam.

Textbooks and Reading Materials

Angrist, J.D. and J.-S. Pischke (2014). Mastering Metrics, Princeton Univer-sity Press

Online video tutorials on Stata (many are available on YouTube).

A detailed reading list will be posted on the course web site