UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Statistical Methods in Marketing

2122-1-F7702M038-F7702M103M

Learning objectives

The aim of the course is to introduce statistical techniques to perform a well-conducted analysis of real data from a population census or sample surveys.

Contents

The contents of the course can be schematically arranged in five parts:

1) Descriptive Statistics

2) Probability

3) Inference

4) Linear regression model

5) Cluster Analysis

Detailed program

1) Descriptive Statistics:
- Univariate distributions
- Location and variability
- Bivariate distributions
- Association

2) Probability:
- Definition and properties
- Random variables (discrete vs. continuous)
- Expectation, Variance, and Covariance

3) Inference:
- Estimators
- Comparison (Mean Squared Errors and efficiency)
- Confidence Intervals
- Hypotheses testing

4) Linear regression model:
- Simple linear model
- Multiple linear model
- Inference

5) Cluster Analysis
- k-means
- Hierarchical methods

Prerequisites

Elements of mathematical analysis.

Teaching methods

Class lectures and exercises through Excel.

Assessment methods

Written exam.

Textbooks and Reading Materials

- **Statistica per le decisioni**. Domenico Piccolo. Il Mulino.

- **Statistica per le analisi di Mercato - Metodi e strumenti**. Francesca Bassi e Salvatore Ingrassia, Pearson.

Semester

Second semester.

Teaching language

Italian.