

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

### **COURSE SYLLABUS**

## **Statistical Methods in Marketing**

2324-1-F7702M038-F7702M103M

#### Learning objectives

The course aims to introduce the student to statistical techniques for data analysis.

#### **Contents**

The fundamental concepts of probability theory and statistical inference will be introduced throughout the course, with additional insights on the linear regression model.

#### **Detailed program**

- 1. Probability Theory
- Definition of probability, axioms, and properties
- · Random variables
- · Law of large numbers and central limit theorem
- 2. Inference
- · Random samples and sampling distributions
- · Theory of estimation
- · Hypothesis testing and confidence intervals
- 3. Linear Regression Models

Prerequisites
Basic knowledge of Mathematical Analysis concepts (study of functions, matrices, summations, and products).
Teaching methods
Frontal lessons and exercises carried out in class (with some references to the use of statistical softwares).
Assessment methods
Written exam
Textbooks and Reading Materials
Statistica per le decisioni. Domenico Piccolo. Il Mulino.
Semester
Teaching language
Italian
Sustainable Development Goals

• Model construction and inference