UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Statistics

2223-4-A5810206

Learning objectives

The course is an introduction to statistics, aiming at building the theoretical competences needed in reading a descriptive analysis and the practical competences needed in performing one, on one side, and at introducing the basics of probability and inference, on the other.

Contents

1. Descriptive statistics
2. GNU-R computational environment
3. Probability calculus
4. Statistical inference

Detailed program

1. Introduction
2. Descriptive statistics
3. Frequency distributions
4. Position indexes
5. Variability indexes
6. Concentration indexes
7. Multivariate distributions
8. Correlation

9. GNU-R computational environment
10. GNU-R
11. GNU-R: Data
12. GNU-R: Distributions
13. Probability calculus
14. Probability axioms
15. Bayes theorem
16. Random variables
17. Probabilistic models
18. Asintotic theorems
19. Inference
20. Random samples
21. Hypothess testing
22. Confidence intervals
23. Linear model

Prerequisites

Basic mathematics.

Teaching methods

Classes and practical exercises.

Assessment methods

Written exam.

Textbooks and Reading Materials

Piccolo D., Statistica per le decisioni, terza edizione, Il Mulino, 2020, ISBN 978-88-15-27220-1

Sustainable Development Goals