UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Data Analysis I

2425-3-E3301M213

Learning objectives

The course aims to present to students the statistical methods, that are typically applied to multivariate data.

Contents

Multivariate statistical data analysis

Detailed program

· Multiple linear Regression

· Principal Components Analysis

· Cluster Analysis

· Dicriminant Analysis

Prerequisites

Elements of asymptotic inference and descriptive statistics

Teaching methods

28 hours of theoretical lectures, 4 cfu, in physical presence. 20 hours in erogative mode, and 8 in interactive way.

Assessment methods

A paper (report), written in ENGLISH or in ITALIANO on an application on a data set of one or two tools presented in the course, by producing, in SPSS softwre, the output and developing a punctual comment on it Then, the student will have a theoretical talk about the course program.

Following the guidelines for writing the syllabus, the exam consists of a CASE ANALYSIS, the description of a real situation or example of which the connection between different elements are discusse and analyzed with respect to one or more technical paradigms.

Textbooks and Reading Materials

In italian:

Slides in e-learning website

In english:

- G. Chow, ECONOMETRICS, Mc Graw Hill,

chapter on "general linear regression", only

- W. Hardle, L. Simar APPLIED MULTIVARIATE STATISTICAL ANALYSIS, Method & Data Tecnologies ed.

chapters 11, 14, 15, 22 (in 2019-20 edition)

Semester

First Semester

Teaching language

Italian

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | AFFORDABLE AND CLEAN ENERGY | DECENT WORK AND ECONOMIC GROWTH | INDUSTRY, INNOVATION AND INFRASTRUCTURE | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION | PEACE, JUSTICE AND STRONG INSTITUTIONS