UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Statistics - 2

2223-1-E3301M192-T2

Learning objectives

Economic disciplines study a variety of phenomena often showing different characteristics. The course provides a number of statistical methods to deal with such phenomena. Students will get the ability of locating and applying the suitable statistical method to describe single phenomena or their relations.

Contents

The course presents the main theoretical treatments of data which are typical for the univariate and bivariate descriptive statistics.

Detailed program

*Statistics as a science

Applications of Statistics

The branches of Statistics

Summarizing univariate data

Data collection

Ratios of statistical data

Frequency distributions and graphical displays

Central tendency measures

Variability measures

Concentration measures

Skewness measures

Mathematical models for frequency distributions

Summarizing bivariate data

Main interpolation methods

The least squares method

The least square line and its properties

Bivariate frequency distributions

Independence and association measures

The regression function and the regression line

Concordance and correlation measures

Multivariate statistics

The plain of least squares

References

M. Zenga, "Lezioni di Statistica Descrittiva", second issue, Giappichelli ed.

M. Zenga “Esercizi di statistica”, Ed. Giappichelli, 1993

M. Zenga “Richiami di matematica”, Ed. Giappichelli, 1992

G. Leti “Statistica descrittiva”, Ed. Il Mulino, 1983.

Prerequisites

The concept of derivative of a function and the problem of maximization of a function must be known to students.

Teaching methods

8 cfu: 52 hours of theoretical lectures and 18 hours of practical lectures . (thesenotes may be change, as the

present sanitary emergency evolves)

Assessment methods

A written theme consisting in practical exercises and comments about the results, and immidiately a written theme about the theoretical part, consisting of general questions or particular aspects or proofs of theorems. The teacher, if necessary, may call the student for an oral talk a few day after the written exams.

Following the guidelines for writing the syllabus the exam consists of PROBLEMS (questions about the analysis of a complex phenomenon and its rationalization by the compositions of diferent principia=

Textbooks and Reading Materials

(online) All that is posted in this e-learning website, about this course.

(offline) M. Zenga, "Lezioni di Statistica Descrittiva", second issue, Giappichelli ed.

M. Zenga “Esercizi di statistica”, Ed. Giappichelli, 1993

M. Zenga “Richiami di matematica”, Ed. Giappichelli, 1992

G. Leti “Statistica descrittiva”, Ed. Il Mulino, 1983.

Semester

Second Semester.

Teaching language

Italian

Sustainable Development Goals

QUALITY EDUCATION