

CORSO DI LAUREA: International Business and Administration

INSEGNAMENTO: Statistics

CFU: 10 CFU

EVENTUALE ARTICOLAZIONE IN MODULI: -

The course is splitted into two parts: the first part (6 CFU) provides the basics on descriptive statistics; the second part (4 CFU) introduces to the probability and probability models. The course is in English as well as the teaching materials and the textbook.

ANNO DI CORSO: II

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ORARIO DI RICEVIMENTO: su appuntamento

RISULTATI DI APPRENDIMENTO DELL'INSEGNAMENTO:

Knowledge and understanding.

The first part provides the main descriptive statistical tools in the field of observational data analysis with a particular focus on the socio-political and economic context.

The second part provides the basic knowledge of probability and probability models.

Ability to apply knowledge and understanding.

Based on the knowledge acquired in the first part, the student will be able to:

- build and comment tables and graphs,
- calculate and interpret synthetic distribution indicators,
- test the dependence between two variables with the use of appropriate indices.

Based on the knowledge acquired in the second part, the student will be able to:

- solve probability calculation exercises,
- use the main probabilistic models.

Making judgments.

The theoretical and applied knowledge acquired in the two parts allow the student to be able to collect sample data, analyse qualitative and quantitative information and interpret the results of observational studies.

Communication skills.

The theoretical and applied knowledge acquired in the two parts allow the student to written synthesize, by using technical language, the information arising from the analysis of socio-economic data.

Learning skills.

At the end of the teaching of the two parts, the student will have acquired the necessary skills to be

able to analyse real data in the context of socio-economic investigations.

PROGRAMMA DETTAGLIATO

INGLESE

The weekly teaching involves lecture and practices. During the practices, students will analyze data, optionally by groups, by using the techniques presented in the previous theoretical lessons. Data analysis is helped by the teacher with the aim of reinforcing the acquired theoretical knowledge.

First Part (6 CFU)

Introduction and data gathering:

- Data collection
- Population and sample.
- Sampling methods.

Descriptive statistics:

- Organizing and summarizing data: qualitative data, quantitative data, tables and graphs.
- Numerically summarizing data: measures of central tendency (computation, interpretation and properties), measures of dispersion (computation, interpretation and properties), measures of central tendency and dispersion for grouped data, measures of position and outliers, boxplot.
- Relations between two variables: scatter diagram, correlation, Least-square regression, the coefficient of determination, contingency table and association.

Second Part (4 CFU)

Probability and Probability distribution:

- Probability: rules, counting techniques.
- Discrete random variables: Bernoulli probability distribution and Binomial probability distribution.
- Normal probability distribution.

EVENTUALI PROPEDEUTICITA' CONSIGLIATE

Mathematics for Management and Economic Applications

MODALITA' DI SVOLGIMENTO DELL'ESAME

The evaluation is based on a written and practical exam divided into two parts.

It is worth noting that, for non-attending students or for specific and certificated situations, the examination procedure can be agreed directly with the teacher.

The teacher may ask an oral integration to practical exam if needed.

Due to pandemic, evaluation features may change.

CRITERI DI VALUTAZIONE DELL'INSEGNAMENTO

The exam is written and practice lasting one hour and half.

I Part: practical exam lasting 1 hour for testing the acquired expertise in analyzing data by using Excel; some theoretical issues may be explored.

II Part: practical examination lasting 30 minutes consisting of multiple-choice questions and/or exercises to be performed in written mode.

The final grade will be given by the weighted average of the marks obtained in the two parts.

CRITERI DI ATTRIBUZIONE DEL VOTO FINALE

Maximum score (30) is assigned for students able to build and proper comment descriptive statistics and probability; minimum score (18) is assigned for correct and complete computation without any comment.

MATERIALE DIDATTICO

M. Sullivan, III. Fondamenti di Statistica. V edizione. Pearson Edition

Teaching materials provided by the teacher.

CONSIGLI DEL DOCENTE

Due to the subject, the teacher recommends attending the lectures.