



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Scienze Economiche, Aziendali e Statistiche
<b>ACADEMIC YEAR</b>	2020/2021
<b>BACHELOR'S DEGREE (BSC)</b>	ECONOMICS AND FINANCE
<b>SUBJECT</b>	STATISTICS 1
<b>TYPE OF EDUCATIONAL ACTIVITY</b>	B
<b>AMBIT</b>	50182-Statistico-matematico
<b>CODE</b>	06647
<b>SCIENTIFIC SECTOR(S)</b>	SECS-S/01
<b>HEAD PROFESSOR(S)</b>	AUGUGLIARO LUIGI      Professore Ordinario      Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	
<b>CREDITS</b>	8
<b>INDIVIDUAL STUDY (Hrs)</b>	132
<b>COURSE ACTIVITY (Hrs)</b>	68
<b>PROPAEDEUTICAL SUBJECTS</b>	04897 - GENERAL MATHEMATICS
<b>MUTUALIZATION</b>	
<b>YEAR</b>	2
<b>TERM (SEMESTER)</b>	1° semester
<b>ATTENDANCE</b>	Not mandatory
<b>EVALUATION</b>	Out of 30
<b>TEACHER OFFICE HOURS</b>	<b>AUGUGLIARO LUIGI</b> Tuesday 10:00 12:00 Stanza n. 201 - secondo piano

DOCENTE: Prof. LUIGI AUGUGLIARO

<b>PREREQUISITES</b>	The full understanding of the arguments of the discipline requires the knowledge about the properties of algebraic operations and some notions of mathematical analysis, i.e. the derivative of a function, the limit of a function and the problem of determining the minimum of a function.
<b>LEARNING OUTCOMES</b>	<p><b>Knowledge and ability to understand</b> At the end of the course, the student will acquire the terminology of the discipline in order to use it in the analysis of an economic data-set; the student will acquire the fundamental tools own of the Descriptive Statistics, it will be able to choose and apply the adequate statistical indices with respect to the type of data that will be analyzed; It will be also introduced the basic notion of the statistical inference.</p> <p><b>Capacity to apply knowledge and understanding</b> At the end of the course, the student will be able to distinguish the different type of data; to identify the nature of the data available for the analysis; he will be able to use the main statistical indices of descriptive statistics; he will be able to study the dependence structure between two variables in order to make decisions under uncertainty.</p> <p><b>Making judgments</b> At the end of the course, the student will be able to do a descriptive analysis of a data-set drawn from a population; to be able to extract and summarize informations from a data-set; to be able to choose the type of dependence between two variables.</p> <p><b>Communication skills</b> At the end of the course, the student will be able to communicate the results coming from a descriptive or inferential analysis by means of simple reports; the student will be able to communicate the obtained results justifying, from a theoretical point of view, the statistical tools used for the analysis.</p> <p><b>Learning skills</b> At the end of the course, the student will be able to understand the results from a statistical analysis; he will be able to re-elaborate the obtained results.</p>
<b>ASSESSMENT METHODS</b>	<p>The assessment of the examinee's preparation is obtained by a written exam and, in case of positive evaluation, an oral exam.</p> <p>The duration of the written exam is of two hours and it is composed of three exercises and an open question. It is structured in order to make comparable the answers given by the students. The exercises are structured with the aim to verify the knowledge of the statistical tools studied during the course; to this end, they are structured in a clear form, are uniquely interpretable and require the application of the most appropriate statistical indices. The aim of the open question is to verify the knowledge of the theoretical foundations of the discipline; it requires the proof of a theoretical property of a statistical index chosen during the design of the written exam. The evaluation of the written exam is negative if the student does not show the knowledge of the main notions studied during the course. In this case the student is failed.</p> <p>If the written exam is evaluated positively, the student must take an oral exam structured in two parts. In the first part, the student will discuss the errors done in the written exam while in the second part the student will have to answer at least two/three oral questions on the whole program of the course. The final assessment aims to evaluate whether the student has the knowledge and understanding of the topics of the discipline. The student will take a positive evaluation whether he shows a full comprehension of the main arguments of the discipline and, at the same time, his presentation skills allow the transmission of his knowledge to the examiner. Below this threshold, the exam will be evaluated insufficient.</p> <p>Final assessment is graded on a scale the goes from zero to thirty points and it is obtained as sum of the evaluation of the written exam (up to 25/30) and the oral exam (up to 5/30).</p>
<b>EDUCATIONAL OBJECTIVES</b>	Aim of the course is the introduction to the basic Statistical concepts. It is well known that it is impossible to do an adequate economic analysis without the knowledge of the statistical tools necessary of to do a quantitative analysis. To this end, the course will be focused on that part of the Statistical theory known as "Descriptive Statistics" which give us the practical and theoretical tools by means of to describe and summarize the features of an economic data-set.
<b>TEACHING METHODS</b>	Lectures and classroom exercises.
<b>SUGGESTED BIBLIOGRAPHY</b>	Appunti forniti dal docente. S. Borra e A. di Ciaccio (2014) Statistica: metodologie per le scienze economiche e sociali. McGraw-Hill Education (Italy) srl

## SYLLABUS

Hrs	Frontal teaching
12	Introduction to Descriptive Statistics, types of statistical data, graphs and frequency distribution tables, index number.
12	Descriptive summary measures from a frequency distribution: averages and measures of variability.
10	Comparison between empirical and theoretical distribution.
10	Correlation and statistical dependence.
4	Introduction to statistical programming language R

  

Hrs	Practice
5	Types of statistical data, graphs and frequency distribution tables.
5	Averages and measures of variability.
4	Comparison between empirical and theoretical distribution.
4	Correlation and statistical dependence.
2	Introduction to statistical programming language R