



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Economiche, Aziendali e Statistiche		
ACADEMIC YEAR	2022/2023		
MASTER'S DEGREE (MSC)	BUSINESS ECONOMIC SCIENCES		
SUBJECT	STATISTICAL METHODS		
TYPE OF EDUCATIONAL ACTIVITY	B		
AMBIT	50585-Statistico-matematico		
CODE	18126		
SCIENTIFIC SECTOR(S)	SECS-S/01		
HEAD PROFESSOR(S)	ADELFO GIADA	Professore Ordinario	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	6		
INDIVIDUAL STUDY (Hrs)	111		
COURSE ACTIVITY (Hrs)	39		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	ADELFO GIADA Tuesday 11:00 13:00 ex DSSM secondo piano Thursday 11:00 13:00 ex DSSM secondo piano		

DOCENTE: Prof.ssa GIADA ADELFINO

PREREQUISITES	Basics of statistics (statistical units, variables, means, variance and regression)
LEARNING OUTCOMES	<p>Conoscenza e capacita' di comprensione</p> <ol style="list-style-type: none"> 1. Knowledge of methods and models for the analysis of multivariate data; 2. Understanding of the questions which can be answered by means of such methods and models; <p>Capacita' di applicare conoscenza e comprensione</p> <ol style="list-style-type: none"> 1. Ability to properly select methods for dealing with specific problems. 2. Ability to interpret the results obtained. <p>Autonomia di giudizio</p> <ol style="list-style-type: none"> 1. Critical understanding of features, potentials and limitations of statistical methods and models used for multivariate data analysis; <p>Abilita' comunicative</p> <ol style="list-style-type: none"> 1. Ability to discuss features and issues of practical problems and to comment the obtained results. 2. Ability to write a scientific-technical report, focussed on the subject-matter problem tackled, illustrating the chosen method and the results obtained. <p>Capacita' d'apprendimento</p> <ol style="list-style-type: none"> 1. Ability to use, in an integrated way, the notions acquired in previous Statistics course. 2. Ability to consult and understand the international literature on multivariate data analysis, in order to update knowledge and technical skills.
ASSESSMENT METHODS	<p>Written and oral exam</p> <p>The written exam aims at assessing the student abilities in problem solving issues with appropriate notation. The coherence of the reported text represents the essential requirement to pass the written test. The oral test aims to study in deep the topics discussed in the written test, and to assess if the student is able to recognize links among different subjects. Using appropriate terms represents one of the most important points to be evaluated. Understanding how to analyze correctly the real data provided for the exam, is essential to pass the exam (score 18-20); wide grasp of the topics along with acceptable language leads to a satisfactory assessment (score 21-24). Finally, some details allow the student to get a pretty satisfactory vote (score 25-27), and an excellent final vote (score 28-30) is granted if the student exhibits full understanding and brilliant performance both in the written and in the oral test.</p>
EDUCATIONAL OBJECTIVES	This course aims at providing the theoretical and applicative know-how of the student in the area of multivariate data modelling. The theoretical part, taught in the front classes, will be complemented from the applications point of view in laboratory tutorials. After attending this course, students should be able: to specify the appropriate statistical method to analyze economical data for the current problem at hand, and to interpret final results.
TEACHING METHODS	theory and practice (on computer)
SUGGESTED BIBLIOGRAPHY	Everitt, B.S. (2005). An R and S-Plus Companion to Multivariate Analysis. Springer. companion website

SYLLABUS

Hrs	Frontal teaching
4	introduction: statistical methods and inference
6	principal component analysis
12	regression analysis: the linear and logit models
8	linear discriminant analysis
Hrs	Practice
9	Examples and discussions relevant to the aforementioned methods