



# UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Ingegneria
ACADEMIC YEAR	2023/2024
MASTER'S DEGREE (MSC)	MANAGEMENT ENGINEERING
SUBJECT	LAB OF STATISTICS
TYPE OF EDUCATIONAL ACTIVITY	F
AMBIT	21260-Altre conoscenze utili per l'inserimento nel mondo del lavoro
CODE	22394
SCIENTIFIC SECTOR(S)	
HEAD PROFESSOR(S)	LOMBARDO ALBERTO    Professore Ordinario    Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	3
INDIVIDUAL STUDY (Hrs)	48
COURSE ACTIVITY (Hrs)	27
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Pass/Fail
TEACHER OFFICE HOURS	<b>LOMBARDO ALBERTO</b> Thursday 12:00 14:00 Stanza docente

**DOCENTE:** Prof. ALBERTO LOMBARDO

<b>PREREQUISITES</b>	Calculus: functions, derivatives, integrals at one and at least two dimensions.
<b>LEARNING OUTCOMES</b>	<p>Knowledge and understanding</p> <p>At the end of the course the student will see applications of probability and the basic tools of inferential statistics (point and interval estimation and verification of parametric and non-parametric hypotheses) and analysis of statistical dependence between variables (analysis of variance and simple and multiple regression).</p> <p>Ability to apply knowledge and understanding</p> <p>The student will be able to use the aforementioned tools in the industrial and business environment.</p> <p>Autonomy of judgment</p> <p>The student will be able to interpret the main results of programmed experiments, as well as organize and read the data coming from his own company.</p> <p>Communication skills</p> <p>The student will acquire the ability to communicate and express problems inherent in non-deterministic phenomena, transferring the need to use suitable tools to his work group.</p> <p>Learning skills</p> <p>The student will have learned the principles of probabilistic and statistical methodology and will be able to acquire new information, as well as read the results of any statistical software.</p>
<b>ASSESSMENT METHODS</b>	Computer exercise. The exams is overcome if the student demonstrates to justify and perform the method chosen
<b>EDUCATIONAL OBJECTIVES</b>	Management engineers, in their activity, use the quantitative tools, decision supports and methodological rigour typical of engineering sciences, aiming at optimizing solutions. At this aim Statistical vision and method, as tool to describe and analyze processes, are fundamental above all in a moving and varying world that needs a coherent non-deterministic approach to be modeled.
<b>TEACHING METHODS</b>	Class lectures and computer-aided exercises
<b>SUGGESTED BIBLIOGRAPHY</b>	Dispense redatte dal docente e in distribuzione presso alcune tipografie al costo di stampa. Distribuzione del materiale didattico supplementare svolto a lezione ed esercitazione attraverso cloud di Ateneo

## SYLLABUS

Hrs	Workshops
28	Summary of the main random variables with applications. Application of statistical software to main statistical methods learnt during the course of STATISTICS: two-sample comparison, one-way and two-way Analysis of Variance, simple and multiple regression, residual analysis