COURSE OF STUDY: Statistical sciences
ACADEMIC YEAR: 2023-2024
ACADEMIC SUBJECT: Statistics for social research

General information	
Year of the course	*Third*
Academic calendar (starting and ending date)	*Second semester*
Credits (CFU/ETCS):	10
SSD	*Statistics for social research-SECS-S/05*
Language	*Italian*
Mode of attendance	*Optional but strongly recommended*

Professor/ Lecturer	
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Department and address	*Department of Economy and Finance, Economics headquarters*
Virtual room	*Teams (first contact the teacher)*
Office Hours (and modalities: e.g., by appointment, on line, etc.)	*Tuesday and Friday, 11 - 13*

Work schedule	
Hours	

Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
250	*70*		*180*
CFU/ETCS			
10			

Learning Objectives	*The course aims to deepen the application part of the main inferential problems that the statistical researcher may run into, also giving ample space to the methodologies for the analysis of mutable statistics, small samples and dependent samples*
Course prerequisites	*It is essential to have acquired the notions of basic statistics*

Teaching strategies	*Frontal lesson with exercises also carried out with a PC, use of a video projector.*

Expected learning outcomes in terms of	
Knowledge and understanding on	Knowledge and understanding on: students must get to know the social phenomenon under study, demonstrating that they know how to identify the objective of the research and consequently know how to choose, among the various statistical methodologies, the most suitable ones for the study in question;
Applying knowledge and understanding on	Applying knowledge and understanding on: given the natural complexity and multidimensionality of the social phenomenon, it is necessary for students to acquire tools which, with a professional approach, will lead them to solve

Soft skills	problems by addressing broad spectrum issues. The themes are therefore addressed trying to convey the impossibility of finding deterministic mechanisms in the relationships between variables, aiming rather to find propensities in the behaviors and attitudes of the subjects; Soft skills - it is essential that the students develop a certain independence of judgment, with an ability to collect, analyze and interpret data; - students must also be able to communicate, through correct reporting, the results of the analyzes carried out, paying attention to the interlocutors for whom they are intended; - students must acquire the necessary knowledge so that they can, with knowledge of the facts, continue their studies by taking more specialized courses of a statistical nature.
Syllabus **Content knowledge**	*Institutional part* *The equality and similarity of statistical variables, statistical mutables and statistical units. Sampling distributions in the various types of sampling. Point and interval estimates in the various types of sampling. The sample size. The use of parametric and non-parametric tests in social research: analysis on one, two and more samples. The log-linear models. The logit models. Methods for quantifying mutable statistics.* *Special part* *Methods for constructing attitude scales: Thurstone, Likert, Guttmann scales. Social indicators: birth, the various types. Problems and methodologies of synthesis of indicators. The Cantril scale and the Affect Balance Scale. Synthesis with an ordinal, cardinal approach, through components, through the Wroclaw taxonomic method, through the principal component method, through factor analysis. Social indicators of quality of life. Time use indicators. indicators of human development*
Texts and readings	F. DELVECCHIO, Statistica per lo studio dei fenomeni sociali, CLEUP, Padova, 2015. F. DELVECCHIO: Scale di misura e indicatori sociali, Cacucci Editore, Bari, 2000.
Notes, additional materials	
Repository	

Assessment	
Assessment methods	The profit exam takes place through an oral interview which can be integrated with exercises to be carried out at the same time as the oral exam. Analytical and problem solving skills as well as the theoretical knowledge acquired contribute equally to the assessment of knowledge, also by virtue of the peculiarity of the predominantly "applied" type of discipline.
Assessment criteria	*Based on the expected learning outcomes indicated above, students are expected to:* *• Knowledge and understanding: have acquired the knowledge and are able to organize a statistical research for the study of the social phenomenon.* *• Applied knowledge and understanding: know how to apply the correct statistical tools for the study of the social phenomenon knowing how to correctly interpret the results obtained in the research carried out* Soft skills *• Critical and judgmental skills: also through examples of concrete cases, they know how to define possible research hypotheses, also demonstrating that they know how to collect data and interpret them*

	• Ability to communicate what has been learned: they are able to understand the research hypotheses, the reasons behind the methodologies adopted, and draw up a report of analysis and interpretation of the results obtained *• Capacities to continue learning: are able, with the methodological skills acquired, to undertake subsequent studies, including research, with a high degree of autonomy*
Final exam and grading criteria	*The final mark is given out of thirty. The exam is considered passed when the grade is greater than or equal to 18.*
Further information	