

General information	
Academic subject	<b>Statistics</b>
Degree course	<i>Three-year degree course in "Economics and Business Administration"</i>
Academic Year	1
European Credit Transfer and Accumulation System (ECTS)	10
Language	<i>Italian</i>
Academic calendar (starting and ending date)	<i>II semester (20 February 2023 – 1 June 2023)</i>
Attendance	

Professor/ Lecturer	
Name and Surname	Carlo Cusatelli
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Department and address	<i>Via Lago Maggiore angolo via Ancona - Taranto</i>
Virtual headquarters	<i>Teams (see the code on the degree course website)</i>
Tutoring (time and day)	Tuesday h.14-15 on site or on-line

Syllabus	
<b>Learning Objectives</b>	<i>Acquisition of theory and technique of Statistics in its continuous methodological evolution for the autonomy in performing statistical tasks, being guided by data</i>
<b>Course prerequisites</b>	<i>Good knowledge of Basic Mathematics</i>
<b>Contents</b>	<p><i>Part I: Descriptive statistics</i></p> <ul style="list-style-type: none"> <li>• <i>Detection and classification of data</i></li> <li>• <i>Distributions and statistical tables</i></li> <li>• <i>Graphical presentations</i></li> <li>• <i>Statistical reports</i></li> <li>• <i>Analytical and loose means</i></li> <li>• <i>Variability: dispersion and inequality measures</i></li> <li>• <i>Normal curve, asymmetry, non-normality</i></li> <li>• <i>Analytical representation of distributions</i></li> <li>• <i>Relations between characters: independence, dependence, interdependence</i></li> <li>• <i>Temporal series: identification of the components</i></li> <li>• <i>Territorial series</i></li> </ul> <p><i>Part II: Probability and Inference</i></p> <ul style="list-style-type: none"> <li>• <i>Principles of probability and main random variables</i></li> <li>• <i>Logic and technical of inference</i></li> <li>• <i>Sample distribution</i></li> <li>• <i>Estimates and confidence intervals</i></li> <li>• <i>Hypotheses testing with one sample</i></li> </ul>
<b>Books and bibliography</b>	<p><i>G. Girone, C. Crocetta, A. Massari. Statistica. Ed. Cacucci. Bari, 2019</i></p> <p><i>F. Delvecchio. Statistica per lo studio dei fenomeni sociali. Ed. Cleup. Padova, 2015</i></p> <p><i>D. Viola, P. Iaquinia. Esercizi di statistica. Ed. Cacucci. Bari, 2016</i></p>
<b>Additional materials</b>	<i>Any other text with a similar index and same "Contents" is fine</i>

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
<b>Hours</b>			
250	80	A dozen (included in the lectures)	170
<b>ECTS</b>			
10			
Teaching strategy			
Lectures, internal cycles of in-depth study, exercises, seminars, laboratory activities, project work, Using traditional and electronic blackboard and computer (if necessary, also in blended learning)			
Expected learning outcomes			
<b>Knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Acquisition of descriptive and inferential statistics tools in order to study collective phenomena (especially in the business, economic and financial fields), for the specification of statistical models that can be used for forecasting and decision-making purposes.</li> <li>○ Knowledge of official statistical sources for the retrieval of data for univariate and multivariate analysis.</li> </ul>		
<b>Applying knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Plan a statistical survey, collect data, store it in databases, process it and present the results obtained.</li> <li>○ Reading and evaluation of the metadata that accompany the statistical sources.</li> <li>○ Perception of collective phenomena and their explanation through the statistical method.</li> </ul>		
<b>Soft skills</b>	<ul style="list-style-type: none"> <li>• <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> <li>○ Translate the cognitive needs of the collective dynamics in statistical terms.</li> <li>○ Evaluate the results deriving from the calculation of statistical indicators and definition of the most suitable methods for achieving results.</li> <li>○ Use the results of the analyzes to formulate interpretative hypotheses, obtain strategic indications, make decisions in conditions of uncertainty.</li> <li>○ Evaluate the ethical and deontological aspects of the results of an investigation, in order to avoid inappropriate use of statistical information.</li> </ul> </li> <li>• <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Synthesize, interpret and clearly present the results of the statistical analyzes carried out, both to experts in the application context and to specialists in the statistical field.</li> <li>○ To grasp and define the statistical objective of a study with non-expert interlocutors, however, divulging the results with appropriate technical language.</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Acquisition of theory and technique of Statistics in its continuous methodological evolution.</li> <li>○ Integration of one's own knowledge of the different realities to be examined, during the various phases of realization of the statistical survey.</li> </ul> </li> </ul>		

<b>Assessment and feedback</b>	
Methods of assessment	<i>Written exam (lasting at least one hour and a quarter) with closed-ended test and possibly oral exam to improve the written grade</i>
Evaluation criteria	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Detect data on statistical units: design and prepare the data collection questionnaire</li> </ul> </li> <li>• <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Organize and adequately assess qualitative and quantitative information on the data source</li> </ul> </li> <li>• <i>Autonomy of judgment</i> <ul style="list-style-type: none"> <li>○ Evaluate the aims of statistical research, organizing the phases of the preparative analysis according to time and space available.</li> </ul> </li> <li>• <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Use and decode statistical language.</li> </ul> </li> <li>• <i>Communication skills</i> <ul style="list-style-type: none"> <li>○ Autonomy in statistical disclosure, being guided by data</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Develop entrepreneurship and initiative</li> </ul> </li> </ul>
Criteria for assessment and attribution of the final mark	<i>During the examination, the Commission will assign 30 theoretical and practical questions and will attribute: 1 point to each correct answer, -0.33 (negative) to each wrong answer, 0 to the missing ones. Therefore, the evaluation is out of thirty and the exam is passed when the total score is greater than or equal to 18.</i>
<b>Additional information</b>	