COURSE OF STUDY *Food Science and Technology (L26)*
ACADEMIC YEAR *2023-2024*
ACADEMIC SUBJECT *Statistics (I.C. Mathematics and Statistics)*

General information	
Year of the course	*First*
Academic calendar (starting and ending date)	*First semester (October 09th, 2023 – January 26th, 2024)*
Credits (CFU/ETCS):	3
SSD	SECS-S/01- Statistics
Language	*Italian*
Mode of attendance	*No Compulsory*

Professor/ Lecturer	
Name and Surname	Samuela L'Abbate
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Telephone	
Department and address	*DEMDI – Department of Economics, Management and Business Law* *University of Bari*
Virtual room	*Microsoft Teams: code kb0pv1i*
Office Hours (and modalities: e.g., by appointment, online, etc.)	*Monday to Friday by appointment only.*

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
75	*16*	*14*	*45*
CFU/ETCS			
3	*2*	*1*	

Learning Objectives	The course aims to provide the theoretical knowledge, operational skills and practical skills to detect, manage and process qualitative and quantitative data in order to describe and interpret real phenomena such as environmental, demographic-social and bioscience related phenomena.
Course prerequisites	Basic mathematics knowledge (functions, integrals, summations).

Teaching strategie	Frontal lessons, exercises cases of study, and small surveys by building and proposing questionnaires.
Expected learning outcomes in terms of	The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification)
Knowledge and understanding on:	• Knowledge of the main synthetic measures of series and distributions data • Knowledge of normal distribution and measures of dependence and interdependence between quantitative and qualitative characters • Basic knowledge of statistical methodologies for the analysis and interpretation of environmental, physical, chemical, territorial, food and technological phenomena.
Applying knowledge and	• Ability to apply statistical methodologies to analyze data and interpret them,

understanding on:	developing deductions and reasoning about them
Soft skills	• *Making* informed *judgments and choices* ○ Ability to perform statistical analysis, collect data and interpret them with the main synthesis and variability measures to implement actions to improve the quality and efficiency of food production and any other related activity, including in terms of environmental sustainability and eco- compatibility. • Communicating *knowledge and understanding* ○ Ability to describe the phenomena studied and to interpret the obtained statistical results. • *Capacities to continue learning* ○ Ability to expand and update their knowledge in the field of statistics
Syllabus	
Content knowledge	Chapter 1. Introduction to Statistics Chapter 2. Detection and classification of data. Chapter 3. Various types of statistical tables Chapter 4. Graphic representations Chapter 5. Statistical Reports Chapter 6. Medium Chapter 7. Variability: Dispersion and Inequality Measures Chapter 8. Asymmetry, normal curve and abnormality Chapter 9. Analytical representation of distributions Chapter 11. General concepts about internal relationships between the components of a double statistical variable Chapter 12. Analysis of dependence Chapter 13. Analysis of interdependence Chapter 15. Analysis of statistical mutable
Texts and readings	• Notes of the lectures • GIRONE-C. CROCETTA-A. MASSARI, "Statistica", Bari, Cacucci Editore, 2019 • P. PERCHINUNNO- V. C. DE NICOLO', "Esercizi di Statistica", CLEUP, 2010
Notes, additional materials	Notes, slides, and other bibliographic materials will be furnished during the course
Repository	All teaching material will be available to students on web platforms Microsoft Teams.

Assessment	
Assessment methods	There are two tests for students enrolled in the course year: one for basic statistics (average, variation, form of distribution) and one for the relationship between two qualitative or quantitative characters. The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical - practical lectures in the classroom and in the laboratory/production plants, as reported in the Academic Regulations for the bachelor's degree in food science and technology (article 9) and in the study plan. Non-Italian students may be examined in English language, according to the aforesaid procedures.
Assessment criteria	• Knowledge and understanding: ○ Know the statistical methods for the analysis and interpretation of phenomena, starting from the data capture and acquisition (definition of units, characters, mode) ○ data processing (construction of tables and graphic representations) ○ correctly interpret from a statistical standpoint the phenomena under

	study (synthesis, variability, form distribution and r relationship between characters) • Applying knowledge and understanding: o Describe the statistical methodologies to apply for analyzing data and interpreting them, developing deductions and reasoning about them. • Autonomy of judgment: o Introduce reasonable hypotheses to improve the quality and efficiency of food production and other related activities, including in terms of environmental sustainability and eco-compatibility. • Communicating knowledge and understanding: o Describe the phenomena studied and interpret the statistical results obtained by showing exposure capabilities and presentation and interpretation skills. • Communication skills: o The student will be evaluated considering the use of appropriate technical language. • Capacities to continue learning: o Thinking an approach to employ acquired knowledge through specific statistical software
Final exam and grading criteria	The evaluation criteria that contribute to the attribution of the final mark will be: knowledge and understanding, the ability to apply knowledge, autonomy of judgment, i.e., the ability to criticize and formulate judgments, communication skills. The Examination Committee has a score ranging from a minimum of 18 to a maximum of 30 points for a positive assessment of the student's performance. By unanimous vote of its members, the Board may award honours in cases where the final mark is 30.
Further information	