Libera Università Internazionale
degli Studi Sociali Guido Carli

LUISS

Syllabus

Academic Year	2023/2024
Program	Business Administration
course	Applied Business Statistics
Term	II semester
Year	2
SSD	SECS-S/01
Credits	6

INSTRUCTIONAL GOALS	The primary objective of this course is to enable students to perform and understand statistical analysis of data, with the view of being able to critically evaluate statistical reports or findings. You will learn to think critically about how statistics are used by others and how it impacts your day-to-day life and career.
INTENDED LEARNING OUTCOMES They describe what a learner is expected to know, understand and be able to demonstrate after completion of a learning path.	**Knowledge and understanding**: The student - by participating in the lectures and practical activities of the course - will develop the ability to understand the fundamental principles of statistics and how to apply these principles to a real business problem. **Applying knowledge and understanding**: Students will practice in addressing real business problems and will be able at the end of the course to use different software to calculate and interpret the results of bivariate regression and correlation analysis for explaining the relationship among variables that are typical of the business industry. **Making judgments**: The students, through the use of the methodologies acquired during the course, will be able to choose the appropriate statistical methodology for real-life business problems. Based on the results obtained students will be able to make their own opinion on a wide range of different real business cases. **Communications Skills**: Through the various activities that will take place during the course such as the business cases discussion and business game simulation students will be able to put develop specific communication skills into practice. **Learning skills**: The statistical knowledge acquired during the course will allow the student to autonomously understand how to address specific business problems. The students will develop a solid knowledge of the fundamental aspects of applied statistics that will allow them to continue to deepen the topics addressed independently.

Pre-requisites	No mathematical background beyond high-school algebra and basic principles of statistics is required.
Course content	Students will be introduced to multivariate applied statistics, with a special emphasis on business allocation. Topics will include general linear hypothesis testing, logistic regression, multilevel models, cluster analysis, principal component analysis, and exploratory data analysis. By using computer software to analyze real business case data and by using the statistical techniques introduced through lectures, students will learn how to interpret the results and to write about the findings.
Reference Books	Slides and materials uploaded by the course instructor. Textbook: Stock, J. H., & Watson, M. W. (2020). Introduction to econometrics (Fourth, global ed.). Pearson.
Teaching Methods	Students will explore and describe data, examine sampling distributions, make estimations, test hypotheses, perform simple and multiple regression analysis, and build models using different software applications both independently and collaboratively. The teaching will be performed through lectures, case studies, and in-class and home exercises.
Assessment	Students will be asked to perform different analyses both individually and in groups. The individual test will count for 30% of the final grade. Group works will count for another 30% and the quality of presentation for an additional 10% of the final grade. The final exam will cover the remaining 30%. All the exercises, the test, and the final exam will require the use of statistical packages.