Fakultät für Wirtschaftswissenschaften
Facoltà di Economia
Faculty of Economics and Management

Syllabus
Course description

Course title	**APPLIED STATISTICS FOR ACCOUNTING AND FINANCE**
Course code	**25408**
Scientific sector	SECS-S/01
Degree	Master in Accounting and Finance
Semester and academic year	1st semester 2022/2023
Year	1
Credits	6
Modular	No

Total lecturing hours	36
Total lab hours	-
Total exercise hours	-
Attendance	Strongly suggested, but not required
Prerequisites	The pre-requisite for this course is a bachelor-level introductory course in statistics.
Course page	Laurea magistrale in Accounting e Finanza / Libera Università di Bolzano (unibz.it)

Specific educational objectives	The course provides the fundamentals of probability and statistics with applications in business and finance. After a review of descriptive statistics and exploratory data analysis, the course will focus on basic probability theory (random variables and common distributions) and statistical inference (point estimation, interval estimation and hypothesis testing). The second part of the course is devoted to the regression model and panel data analysis. The methods will be illustrated by using the R statistical computing environment.

Lecturer	Dr. Greta Goracci greta.goracci@unibz.it
Scientific sector of the lecturer	SECS-S/01
Teaching language	English

Learning outcomes	Knowledge and understanding: • Acquire knowledge and understanding of statistical methods related to common types of financial and business data. Applying knowledge and understanding: • Manipulate and summarize the data; • Apply statistical methods to real financial data sets using statistical software. • Interpret the results of the analyses in the context of common finance and business problems. Making judgments • Think critically and make effective decisions based on appropriate statistical analyses. Communication skills • Communicate effectively the results from statistical analyses, even to a non-specialised audience.

Assessment	Final-term exam and mid-term exam (optional) The written examinations are composed of several exercises and review questions. They assess the understanding of the theoretical concepts introduced during the course and the student's ability to apply the methods to real datasets and to interpret the results.
Assessment language	English
Evaluation criteria and criteria for awarding marks	Final-term exam: score up to 15 Mid-term exam: score up to 15 The final mark is the sum of the marks of the two exams For students without the mid-term exam: Complete final exam: score up to 30

Required readings	Main textbook: Ross, S. Introduction to Probability and Statistics for Engineers and Scientists. 6th Ed. 2020, Academic press, **ISBN:** 9780128243466.
Supplementary material	Additional reference textbooks on statistical methods and statistical computing for financial data are: Lee, C. F., Lee, J. C., & Lee, A. C. *Statistics for Business and Financial Economics*. Springer, 2013.

	Wooldridge, J. M. *Introductory Econometrics: A Modern Approach.* Nelson Education, 2020. Tsay, R.S., 2014. *An introduction to analysis of financial data with R*. John Wiley & Sons. Ruppert, David. *Statistics and finance: an introduction*. Springer, 2014. Carmona, René. *Statistical analysis of financial data in R*. Vol. 2. New York: Springer, 2014.