Syllabus

Descrizione corso

Titolo insegnamento	Preparatory course in Statistics
Codice insegnamento	27425
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	STAT-01/A
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Politiche Pubbliche e Governance innovativa
Altri Corsi di Studio (mutuati)	
Docenti	dott. Marta Nai Ruscone, Marta.NaiRuscone@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/39746
Assistente	
Semestre	Primo semestre
Anno/i di corso	1
CFU	0
Ore didattica frontale	36
Ore di laboratorio	-
Ore di studio individuale	-
Ore di ricevimento previste	0
Sintesi contenuti	Preparatory course in Statistics: The course refers to the complementary educational activities chosen by the students and belongs to the scientific area of Statistics and Probability. The course is designed to acquire or review the core competencies necessary to more advanced topics.
Argomenti dell'insegnamento	Module 1 • Descriptive Statistics: Frequency tables; • Summary Statistics (measures of central tendency and

	dispersion); • Graphical tools; • Introduction to bivariate analysis; • Probability: events, counting rules and classic definition, additive and multiplicative rule, conditional probability and independence. Module 2 • Discrete and continuous random variables, probability distributions and expected values; • Central Limit theorem and its applications; • Introduction to inferential statistics; • Sampling and sampling distributions; • Point estimators; • Confidence Intervals.
Parole chiave	Descriptive and summary statistics, graphical tools; bivariate analysis, probability, discrete and continuous random variables, central limit theorem, inferential statistics, sampling, point estimators, confidence Intervals.
Prerequisiti	
Insegnamenti propedeutici	
Modalità di insegnamento	Frontal lectures, exercises.
Obbligo di frequenza	Attendance is suggested, but not required. Students without a background in Statistics and Probability are strongly recommended to attend the "preparatory course" in Statistics and Probability organized at the beginning of the first semester.
Obiettivi formativi specifici e risultati di apprendimento attesi	• Knowledge and understanding: Students learn the basics of probability and statistical theory. • Applying knowledge and understanding: Students develop the ability to analyze real data by exploiting via tables, graphical tools, and data summaries. • Making judgments: Ability to describe and discuss specific economic issues with a critical point of view by analysing data or evaluating probabilities. • Communication skills: Ability to present in a consistent and precise way the results obtained from the statistical or probabilistic analysis. • Learning skills: Ability to understand and analyse the economic data from a quantitative perspective.

Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	Students successfully attending the course will be able to i) explore, visualize, and interpret different types of data by producing graphs and computing numerical data summaries, ii) describe empirical phenomena through probability and random variables, and use basic theorems to manipulate them.
Modalità di esame	A final written exam with both closed and open questions.
Criteri di valutazione	The test will have no negative consequences, as it is aimed at making aware students of their own knowledge. In case of "not-passed" outcome, the student could decide with the Lecturer how to improve his/her knowledge.
Bibliografia obbligatoria	- P. Newbold, W. L. Carlson, B. M. Thorne, Statistics for Business and Economics – Global Edition, Pearson, New York, 2023, 10th Ed. ISBN 978-12-924-3684-5. Chapters 1-5. - Additional teaching material (slides, past exams) will be available on a web folder at the beginning of the course.
Bibliografia facoltativa	Further readings will be announced during the course.
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Utilizzo responsabile delle risorse, Buona occupazione e crescita economica