Syllabus

Course Description

Course Title	Basic statistics and regressions
Course Code	29077
Course Title Additional	
Scientific-Disciplinary Sector	NN
Language	English
Degree Course	PhD Programme in Management
Other Degree Courses (Loaned)	
Lecturers	
Teaching Assistant	
Semester	First semester
Course Year/s	1
CP	0
Teaching Hours	20
Lab Hours	0
Individual Study Hours	-
Planned Office Hours	
Contents Summary	This course introduces core statistical methods with a focus on inference and regression modeling, tailored to applications in management and business decision-making. Students learn how to estimate, test, and model relationships using data, with practical implementation in R.
Course Topics	Part I: Statistical Inference 1. Sampling Distributions and the Logic of Inference 2. Confidence Intervals 3. Hypothesis Testing Part II: Regression Modeling 4. Simple and Multiple Linear Regression 5. Statistical Inference in Regression 6. Extenting the linear regression model

Keywords	
Recommended Prerequisites	Not foreseen
Propaedeutic Courses	
Teaching Format	Frontal lectures with practical in-class computing tutorials
Mandatory Attendance	Required
Specific Educational Objectives and Learning Outcomes	The first part covers statistical inference (estimation, confidence intervals, hypothesis testing); the second focuses on linear regression techniques for analyzing economic and managerial data. The course equips students with the tools to conduct empirical research and supports further study in econometrics and data-driven management.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	Assessment is based on two short data analysis projects. The first focuses on statistical inference; the second applies linear regression to a business dataset.
Evaluation Criteria	
Required Readings	Lecture slides and R computing handouts. In addition selected readings for following texbooks will be assigned in class: Hogg, R. V., Tanis, E. A., & Zimmerman, D. L. (2019). *Probability and Statistical Inference* (10th ed.). Pearson.James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). *An Introduction to Statistical Learning with Applications in R* (2nd ed.). Springer. Available free online: https://www.statle
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	