Syllabus

Course Description

Course Title	Statistical Methods for Business Analysis
Course Code	25559
Course Title Additional	
Scientific-Disciplinary Sector	STAT-01/A
Language	English
Degree Course	Master in Entrepreneurship and Innovation
Other Degree Courses (Loaned)	
Lecturers	
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	6
Teaching Hours	36
Lab Hours	18
Individual Study Hours	-
Planned Office Hours	18
Contents Summary	This course begins with a review of key principles of statistical inference and then introduces core concepts in statistical learning. Topics include linear regression and its extensions, advanced regression techniques such as decision trees, logistic regression, classification methods, model selection strategies, and unsupervised learning approaches like principal component analysis and clustering. Throughout the course, students will work hands-on in R, applying techniques to real-world datasets drawn from business scenarios. By the end, students will be able to choose suitable statistical models, apply them to a range of business problems, and effectively communicate their analytical insights.
Course Topics	
Keywords	

Recommended Prerequisites	No formal prerequisites are required. Nonetheless, knowledge of basic concepts in descriptive and inferential statistics is useful, and attending a pre-course in mathematics/statistics is recommended.
Propaedeutic Courses	
Teaching Format	
Mandatory Attendance	
Specific Educational Objectives and Learning Outcomes	INTENDED LEARNING OUTCOMES (ILO) ILO 1: KNOWLEDGE AND UNDERSTANDING ILO 1.a The student acquires advanced knowledge and understanding of the theories and tools for the economic analysis of business decisions; ILO 1.b The student acquires knowledge and understanding of the theories and tools of statistical analysis for making market forecasts; ILO 1.c The student acquires advanced knowledge and understanding of business analysis tools and solutions for the development of innovations and organisational knowledge; ILO 1.d The student acquires knowledge of quantitative models for the formulation of forecasts necessary to guide management decisions and to predict the life cycle of a product and a sector. ILO2: ABILITY TO APPLY KNOWLEDGE AND UNDERSTANDING ILO 2.a Ability to acquire and select information that may be relevant from an entrepreneurial point of view, also in economic-productive contexts different from those studied; ILO 2.b Ability to select business economics models, suitable for the appropriate analysis of a specific economic-social and productive context; ILO 3: AUTONOMY OF JUDGEMENT ILO 3.a Acquire the ability to make predictions, such as analysing the future consequences of entrepreneurial, managerial and

	operational choice; ILO 3.b Autonomy of judgement is developed in the training activities carried out for the preparation of the thesis, as well as in the exercises that accompany the lectures and that involve group discussions and the comparison of individual analyses carried out by students in preparation for the lecture. ILO 4: COMMUNICATION SKILLS ILO 4.a Acquire the ability to describe and communicate in an intercultural context, in a clear and precise manner, problematic situations typical of the management of a new enterprise and the development of innovation, such as, for example, the conditions for the validation of a problem or solution, the prospects and risks associated with a business model or an innovation project. The development of communication competences assumes heterogeneous situations such as, for example, the presence of internal stakeholders (e.g. colleagues, managers, owners), or external stakeholders (e.g. potential investors, suppliers and other business partners) and the ability to sustain an adversarial process; ILO 4.b The achievement of these objectives is assessed in the course of the training activities already mentioned, as well as in the discussion of the final thesis. ILO 5: LEARNING SKILLS ILO 5.a Acquire the ability to study independently, to prepare summaries; ILO 5.b Acquire the ability to identify thematic connections and to establish relationships between different cases and contexts of analysis; ILO 5.c Acquire the ability to frame a new problem systematically and to generate appropriate taxonomie; ILO 5.d Acquire the ability to develop general models from the phenomena studied.
Specific Educational Objectives and Learning	

Outcomes (additional info.)	
Assessment	
Evaluation Criteria	
Required Readings	
Supplementary Readings	
Further Information	Lecturer to be defined
Sustainable Development Goals (SDGs)	Good health and well-being, Climate action, Reduced inequalities, Decent work and economic growth