Syllabus

Course Description

Course Title	Business Intelligence and Data Visualization
Course Code	25460
Course Title Additional	
Scientific-Disciplinary Sector	SECS-P/07
Language	English
Degree Course	Master in Accounting and Finance
Other Degree Courses (Loaned)	
Lecturers	Prof. Nicola Dalla Via, Nicola.DallaVia@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/41428
Teaching Assistant	
Semester	Second semester
Course Year/s	2
CP	6
Teaching Hours	36
Lab Hours	-
Individual Study Hours	-
Planned Office Hours	18
Contents Summary	The course offers a balanced introduction to the principles and practice of business data analysis and visual storytelling. Students gain hands-on experience with Excel and Tableau to collect, prepare, and explore data, applying descriptive, predictive, and prescriptive analytics in business contexts. By combining conceptual foundations with technical training and visualization best practices, the course equips students to design interactive dashboards and reports that effectively support decision-making and performance management.
Course Topics	• Foundations of business data analytics, including the data

	analysis process and the development of an analytics mindset in accounting and business decision-making. • Techniques for preparing and transforming data, with a focus on Extract–Transform–Load (ETL) processes to ensure data quality and usability. • Practical analysis of business data with Excel and relational databases, emphasizing PivotTables, descriptive analytics tools, and the integration of multiple data sources. • Visual storytelling with Tableau, including the design of interactive dashboards and visualizations to support communication and decision-making. • Application of descriptive, diagnostic, predictive, and prescriptive analytics to address business questions and enhance performance management.
Keywords	Business Data Analytics, Data Preparation (ETL), Data Visualization and Dashboards, Predictive and Prescriptive Analytics
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	Frontal lectures, exercises and case studies. The course will combine in-class explanation, problem-solving and case discussion. Students are expected to participate actively in class.
Mandatory Attendance	Although course attendance is not compulsory, it is highly recommended
Specific Educational Objectives and Learning Outcomes	Knowledge and understanding: Master's degree graduates should be able to acquire an advanced level of preparation that allows for an in-depth and integrated view of accounting and budgeting and planning and management control issues. These learning outcomes are achieved through an advanced knowledge and understanding - of economic-financial communication to stakeholders in national and international contexts; - of economic-business models and performance measurement for planning and management control of internal and external audit models and methods. Accounting courses will also enable students to acquire skills in specialised topics that characterise the profession of chartered accountants and auditors.

	Making judgements: Ability to apply the acquired knowledge to make managerial and operational decisions and to solve problems in the administration and finance of companies, intermediaries and financial markets, jointly taking into account multiple perspectives of analysis, from economic to legal, financial, strategic, managerial. Ability to select data and use appropriate information to describe a problem concerning the management of companies, intermediaries and financial markets. Ability to relate models and empirical evidence in the study of companies, intermediaries and financial markets. Communication skills: Ability to communicate effectively in oral and written form the specialised contents of the individual disciplines, using different registers according to the recipients and the communicative and didactic purposes, and to evaluate the formative effects of its communication Learning skills: a) ability to use information technology autonomously to carry out bibliographic research and investigations and for one's own training and updating b) ability to identify thematic links and establish relationships between different cases and contexts of analysis c) ability to frame a new problem systematically and to generate appropriate taxonomies d) ability to develop general models from the phenomena studied.
Specific Educational Objectives and Learning Outcomes (additional info.)	The course will provide an initial overview of the topics covered in the Tableau Desktop Specialist and Tableau Certified Data Analyst exams. Students interested in acquiring the Tableau data visualization certification will benefit from the course. On completion of this course, students should be able to: • Understand the fundamental concepts and principles of BI and Data Visualization • Gain proficiency in using BI tools and software like Tableau for data analysis and visualization • Develop skills in creating interactive dashboards and reports to communicate insights effectively

	• Explore various data visualization techniques and best practices for conveying information accurately and persuasively • Apply the appropriate problem solving, computational and communication skills essential to the preparation and analysis of managerial reports. Knowledge and understanding: • Understand how companies generate, manage, and analyse internal financial and non-financial information using BI systems • Describe the main tools and technologies used in data analysis and visualization • Describe the different types of accounting data analytics: descriptive, predictive, and prescriptive Applying knowledge and understanding: • Apply analytics models in several business settings • Apply data cleaning and preprocessing techniques to solve specific problems • Ability to integrate financial information with non-financial information to effectively support managerial decision-making • Utilize Business Intelligence software to create interactive dashboards and informative reports from complex accounting datasets Making judgments: • Ability to search for, evaluate and suggest appropriate analytical frameworks to diagnose and solve multifaceted managerial problems • Ability to analyse complex business settings and apply appropriate problem solving, computational and communication skills • Critically evaluate data visualization strategies and techniques used to communicate complex information Learning skills: • Ability to prepare a managerial report to communicate the results of a data analysis and effectively present results and insights through compelling and interactive visual narratives • Design and develop customized Business Intelligence solutions to meet specific business needs, integrating data from various

	sources • Provide relevant information for decision-making, as well as solutions in response to specific issues related to the measurement and management of corporate and managerial performance
Assessment	For students that actively engage in course activities, the course evaluation is based on a combination of: • Optional Midterm • Assignments • Final Exam: combination of multiple choice and essay questions These assessments are intended to gauge how well students understand the material covered throughout the course (comprehension) and the interconnections (integration) among various topics.
Evaluation Criteria	Non-attending students: • Final Exam (combination of multiple choice and essay questions): 100% Attending students that actively engage in course activities can combine: • Optional Midterm • Assignments • Final Exam (combination of multiple choice and essay questions) Students must pass the Final Exam to have a passing grade in the course. The grade of the optional Midterm and of the Assignments are valid for one academic year.
Required Readings	The detailed list of required course readings and learning material is announced by the beginning of the course (see the OLE platform).
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Decent work and economic growth, Quality education