Syllabus

Course Description

Course Title	Business Intelligence and Data Visualization
Course Code	25460
Course Title Additional	
Scientific-Disciplinary Sector	ECON-06/A
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	ILO (Intended Learning Outcomes) ILO 1 – Knowledge and Understanding ILO 1.1 Knowledge of economic-financial communication to stakeholders in national and international contexts. ILO 1.2 Understanding of business models and performance measurement for planning and management control, as well as internal and external auditing methods and models. ILO 2 – Applying Knowledge and Understanding ILO 2.1 Ability to develop and integrate the results of economic-financial communication into corporate decision-making models. ILO 3 – Making Judgements ILO 3.1 Ability to relate models and empirical evidence in the study

	of companies, intermediaries, and financial markets. ILO 4 – Communication Skills ILO 4 Ability to communicate effectively, both orally and in writing, the specialised content of individual disciplines, using different registers depending on the audience and the communicative and educational purposes, and to assess the educational impact of such communication. ILO 5 – Learning Skills ILO 5.1 Ability to frame a new problem systematically and to generate appropriate taxonomies. ILO 5.2 Ability to develop general models based on the phenomena studied
Specific Educational Objectives and Learning Outcomes (additional info.)	The course will provide an initial overview of the topics covered in the Certified Tableau Desktop Foundations and Certified Tableau 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 (ILOs 1.1, 1.2) • Assignments (ILOs 2.1, 3.1, 4, 5.1, 5.2) • Final Exam: combination of multiple choice and essay questions (ILOs 1.1, 1.2, 2.1, 3.1) 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). Dzuranin, A. C., Geerts, G. L., & Lenk, M. M. (2024). *Data and Analytics in Accounting: An Integrated Approach* (1st ed.). Wiley. ISBN 978-1-119-88912-0.
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Decent work and economic growth, Quality education