Syllabus

Kursbeschreibung

Titel der Lehrveranstaltung	OFA-Mathematics
Code der Lehrveranstaltung	27361
Zusätzlicher Titel der Lehrveranstaltung	
Wissenschaftlich-disziplinärer Bereich	NN
Sprache	Englisch
Studiengang	Bachelor in Wirtschaftswissenschaften und Betriebsführung
Andere Studiengänge (gem. Lehrveranstaltung)	
Dozenten/Dozentinnen	Dr. Paolo Maraner, Paolo.Maraner@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/12920
Wissensch. Mitarbeiter/Mitarbeiterin	
Semester	Erstes Semester
Studienjahr/e	1
KP	0
Vorlesungsstunden	20
Laboratoriumsstunden	-
Stunden für individuelles Studium	-
Vorgesehene Sprechzeiten	0
Inhaltsangabe	Basic mathematical knowlegdge and skills.
Themen der Lehrveranstaltung	Basic mathematics. rational numbers: fractions and decimal representation percentages division with remainder absolute value

	powers, logarithms and rules for both manipulation of algebraic expressions (expanding, factoring, canceling) intersections, unions, di¿erences of sets Equations. solving linear equations with one variable solving quadratic equations ¿nding equations of straight lines in the plane Functions. graphs of linear, quadratic, logarithm and power functions graph of absolute value function relationship between roots of functions and solving equations
Stichwörter	
Empfohlene Voraussetzungen	
Propädeutische Lehrveranstaltungen	
Unterrichtsform	
Anwesenheitspflicht	Attendance not compulsory, but recommended
Spezifische Bildungsziele und erwartete Lernergebnisse	ILO 1 Knowledge and understanding ILO 1.1 Knowledge of basic and intermediate mathematical tools for ILO ILO 1.2 Understanding and analysis of economic mechanisms through theoretical models and empirical applications ILO 1.3 Knowledge of tools for static, dynamic, and comparative analysis for the analysis of data on individuals, businesses, and economies ILO 1.4 Knowledge and understanding of descriptive statistics, the fundamentals of probability theory and sampling methods, standard distributions and their application to economic analysis, as well as linear and non-linear regression Understanding of parametric estimation and hypothesis testing ILO 1.5 knowledge of the IT tools needed to read and analyse economic data and models ILO 1.6 knowledge of the structure of IT networks, their main applications and security techniques, as well as techniques for collecting, presenting and analysing data with the aid of appropriate software ILO 1.7 knowledge of international accounting systems and the

	double-entry method for recording and evaluating business management operations ILO 1.8 Understanding of financial statements ILO 1.9 In-depth knowledge of accounting data recording or management control ILO 1.10 Knowledge of the analysis method for estimating present values and discount factors to estimate the cost of capital and the valuation of bonds and shares ILO 1.11 Knowledge of medium- and long-term financial forecasting methodologies and sensitivity analysis with simulation under conditions of uncertainty to manage corporate and international finance risks ILO 1.12 Knowledge and understanding of the international financial environment, techniques for defending against multinational risks, and competitive strategies adopted by global banks ILO 1.13 Knowledge of the mechanisms underlying effective communication of quantitative topics in three languages: Italian, German and English ILO 2 Quantitative methods for decision-making ILO 2.1 Ability to analyse (unconstrained) optimisation problems and mathematically interpret models of social and economic dynamics ILO 2.2 Ability to formalise economic problems through mathematical models, solve such problems and interpret the results conceptually ILO 2.3 Ability to analyse economic data using descriptive, parametric and non-parametric statistical methods as well as linear and non-linear regression and interpret the results ILO 2.4 Ability to apply international accounting standards to different business contexts ILO 2.5 Ability to extract and interpret economic information from the web ILO 2.6 Ability to use computers and computer networks to analyse large amounts of data in solving complex problems and to write theses and articles ILO 2.7 Ability to evaluate fixed-income financial instruments and shares of companies listed on stock markets using spreadsheet programmes

	ILO 2.8 Ability to analyse financial statements using balance sheet ratios and communicate the results in accordance with international professional standards ILO 2.9 Ability to apply the main theories on the capital, foreign exchange and commodity markets to actual data, including at international level ILO 2.10 be able to establish the structure and implementation of an empirical project using econometric software and financial or economic databases ILO 2.11 be able to use financial investment performance evaluation techniques and understand the mechanisms of pricing risky financial assets and spot and forward interest rates ILO 2.12 Ability to work with basic and intermediate mathematical tools and basic statistical tools to study the behaviour of economic agents from a theoretical and empirical perspective ILO 2.13 Ability to analyse economic datasets using spreadsheets or other appropriate software ILO 2.14 Ability to use IT tools for economic analysis ILO 2.15 Ability to communicate the results of quantitative analyses prepared in accordance with international professional standards in three languages: Italian, German and English
Spezifisches Bildungsziel und erwartete Lernergebnisse (zusätzliche Informationen)	-
Art der Prüfung	Written test.
Bewertungskriterien	Correctly solving a number of elementary mathematical exercises in English (ILO 1.1, 2.15).
Pflichtliteratur	Will be notified
Weiterführende Literatur	
Weitere Informationen	The test can be repeated during the semester; OFA can also be passed by successfully completing the written Mathematics for Economists exam at the end of the fall semester.
Ziele für nachhaltige Entwicklung (SDGs)	Weniger Ungleichheiten, Hochwertige Bildung