Syllabus

Course Description

Course Title	Preparatory course in Mathematics - Mathematics for Economists
Course Code	30152
Course Title Additional	
Scientific-Disciplinary Sector	STAT-04/A
Language	English
Degree Course	Bachelor in Tourism, Sport and Event Management
Other Degree Courses (Loaned)	
Lecturers	Dott. Benjamin Weißing, Benjamin.Weissing@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/35796
Teaching Assistant	
Semester	Not defined
Course Year/s	not defined
CP	0
Teaching Hours	20
Lab Hours	-
Individual Study Hours	-
Planned Office Hours	-
Contents Summary	This course offers a review of key mathematical concepts to support students as they begin undergraduate studies in economics. It covers mathematical logic, sets, number systems, fractions, polynomials, powers, logarithms, and basic combinatorics. The course also revisits solving equations and inequalities, working with algebraic expressions, and analysing and graphing elementary real functions such as quadratic, polynomial, rational and exponential functions. The course combines short lectures with exercises and active participation to reinforce understanding.

Course Topics	The course starts with propositional logic, students learn about statements, logical connectives, and the construction of truth tables. The course then introduces set theory, including different ways to represent sets as well as the operations of union and intersection. A section on number systems explores the natural numbers, integers, rational numbers, and real numbers, highlighting their properties and relationships. Finally, the course examines key types of functions, focusing on linear, quadratic, polynomial, exponential, and logarithmic functions, and developing an understanding of their algebraic forms and graphical behavior.
Keywords	Propositional Logic, Sets, Numbers, Functions
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	synchronous in person lecture and exercises
Mandatory Attendance	optional course, no mandatory attendance
Specific Educational Objectives and Learning Outcomes	ILO (Intended Learning Outcomes) ILO 1 - Knowledge and understanding ILO 1.1 Basic mathematical concepts (sets and operations on sets, relationships and their properties, general functions, numbers and elementary equations/inequalities) ILO 1.5 Mathematical terminology in English. ILO 2 - Ability to apply knowledge and understanding ILO 2.1 Basic concepts useful for attending courses in economics, business administration and management
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	The written test (ILO 1-2) at the end of the preparatory course serves to assess students' initial knowledge in mathematics. If the assessment is negative, the student will be assigned additional educational requirements (OFA) to be fulfilled within the first study year.
Evaluation Criteria	Correctness of answers in the written test.
Required Readings	• none

Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Quality education